

Exclu du prêt.

TITRE

50376

1957

2-3

présentée à la Faculté des Sciences de LILLE

pour obtenir le grade de Docteur ès Sciences Naturelles

par

Emile MELAN-YB

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Le Phytoplancton et les Algues  
microscopiques épiphytes  
des eaux douces du  
Nord de la France

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Volume III

Tableaux de répartition des espèces  
et histogrammes

1957

Emile DELAHAYE

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# RUMEAU COURT. PALLUEL.

	394	434	454	477	524	553	594	638	674	719	1	2	3	4	5	6	7	8	9	10	398	432	453	493	593	630	673	718	
<i>Pendromina novem</i>								X																					
<i>Eudromina legans</i>								X																					
<i>Racotus lenticularis</i>																								X		X			
<i>Gediontrum baryanum</i>					X	X	X		X	X																			
" duplex var. reticulatum		R			X	X	X		X	X																			
" duplex var. gracillimum								X																					
" tetras									X	X																			
<i>Locyptis gigas</i>																													
" parva																													
<i>Sphaenocephalus schroeteri</i>																													
<i>Chimella vulgaris</i>																													
<i>Microchroa contorta</i>																													
" obesa var. pygmaea																													
<i>Crucigera minima</i>																													
<i>Catantopora minima</i>																													
<i>Scenedesmus arcuatus</i> & <i>abnormis</i>								X		X																			
" " " <i>flatidusa</i>									X																				
" <i>lygia</i>	R	R			X	X	X		X	X																			
" <i>carinatus</i>					X	X	X		X	X																			
" <i>denticulatus</i>					X	X	X		X	X																			
" <i>quadrifurcatus</i>					X	X	X		X	X																			
" " " <i>quadrifurcatus</i>					X	X	X		X	X																			
<i>Amblyrodemus falcatus</i>					X	X	X		X	X																			
" " " <i>acicularis</i>					X	X	X		X	X																			
<i>Diacyclops thomasi</i>																													
<i>Colantopus canaliculatus</i> & <i>intercedens</i>																													
" <i>microforatus</i>																													
<i>Salmastrium bairdianum</i>																													
" <i>Whitei</i>																													
<i>Glyptotendipes thomasi</i>	R																												
" <i>trabeata</i>																													
<i>Meloidia amplexa</i>																													
" <i>granulata</i>																													
" <i>albica</i>																													
" <i>varians</i>																													
<i>Cyclopella comta</i>																													
" <i>hutzingeriana</i>																													
" <i>meneghiniana</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>decalata</i> & <i>meota</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>striata</i>																													
<i>Ephyra diadema</i> & <i>var. punctata</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>hutzingeri</i>	X	X	X	X	X	X	X	X	X	X																			
<i>Calanoides foveolata</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>foculosa</i>	X	X	X	X	X	X	X	X	X	X																			
<i>Diaptomus thomasi</i>	X	X	X	X	X	X	X	X	X	X																			
<i>Argulus brevis</i> & <i>triat.</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>ceprina</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>crustacea</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>protonotus</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>inversus</i>	X	X	X	X	X	X	X	X	X	X																			
" <i>inversus</i>	X	X	X	X	X	X	X	X	X	X																			

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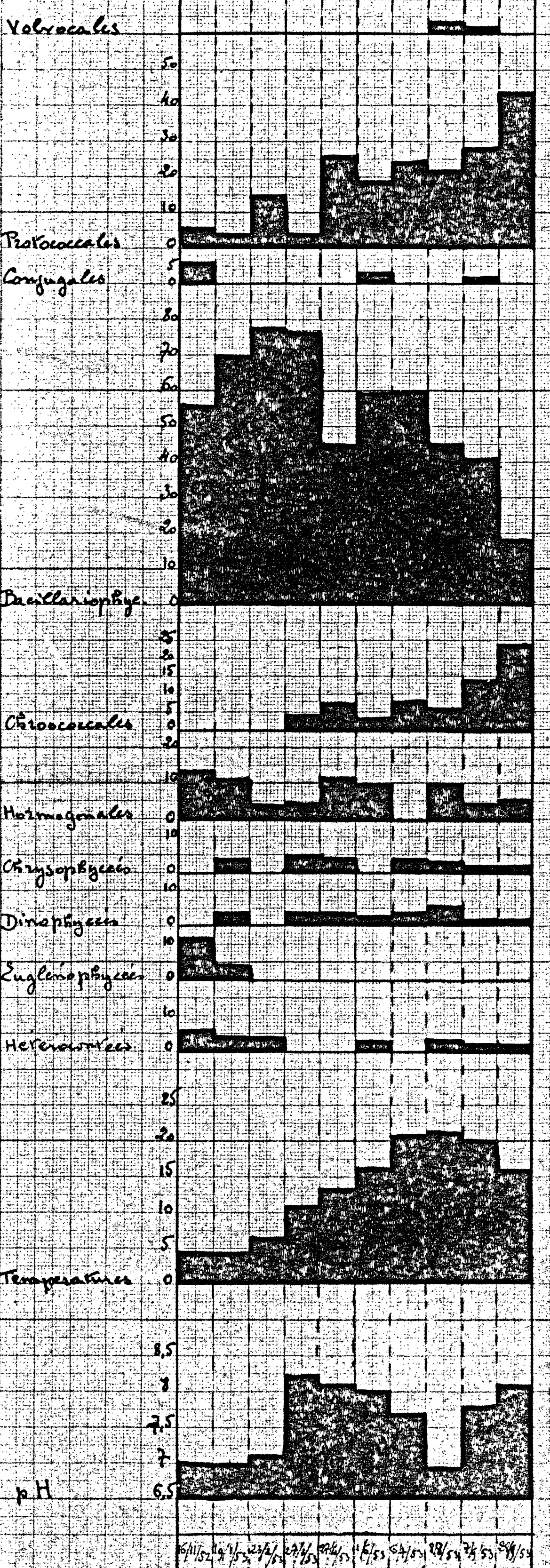


# RUMAUCOURT

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## Repartition des groupes phytoplanctoniques

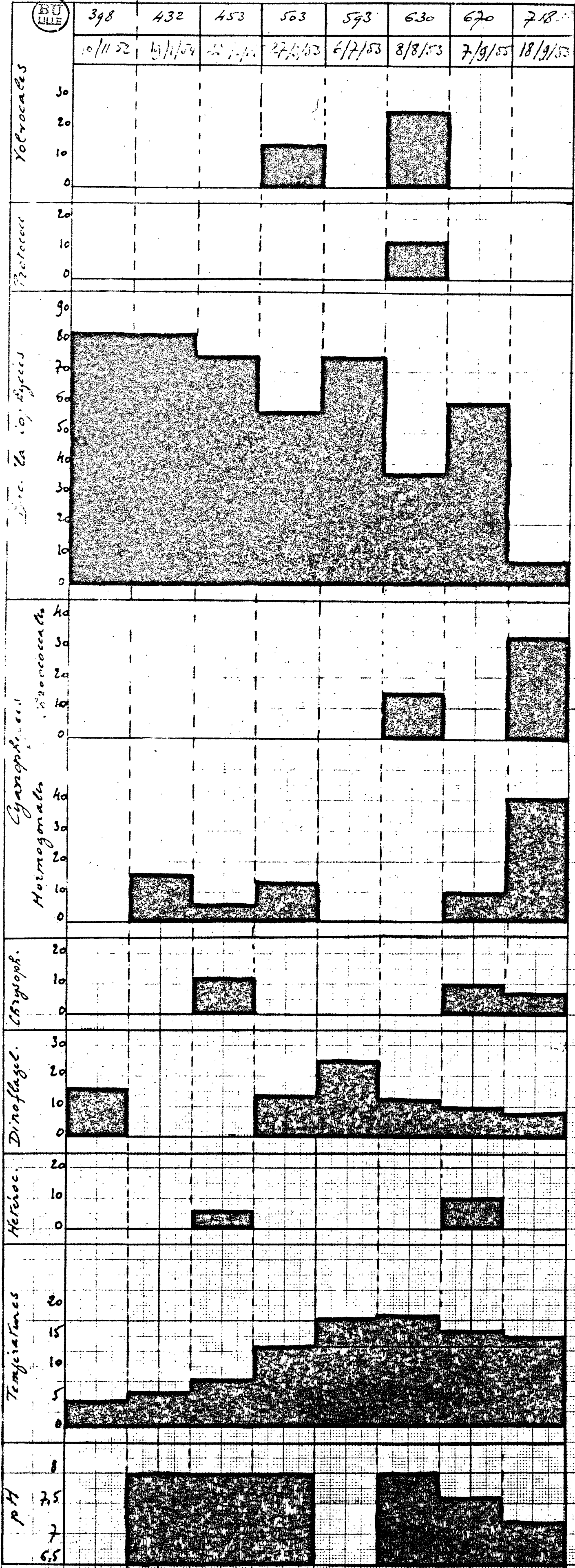
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6/11/52 19/1/53 23/2/53 27/4/53 27/6/53 1/6/53 5/7/53 18/8/53 28/5/53 28/8/53

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LILLE

Repartition des groupes phytoplanctoniques





# VALLÉE DE LA SCARPE.

# ETANG DE ROEUX.

	430	542	581	623	689	747		430	542	581	623	689	747
<i>Nolva amara</i>						X							
<i>Pharus lenticularis</i>													
<i>Pediastrum boryanum</i>			XX	X	XX	R							
<i>Pediastrum duplex</i>			XX		XX	R							
<i>Pediastrum duplex var. reticulatum</i>													
<i>Pediastrum tetras</i>					XX	R							
<i>Pediastrum tetras var. tetradium</i>					XX	R							
<i>Chlorella gelatinosa</i>					XX								
<i>Quadrifida lacustris</i>					XX								
<i>Chlorella vulgaris</i>					XX								
<i>Tetradium minimum</i>			R		XX								
<i>Tetradium hastatum</i>					XX								
<i>Scenedesmus abundans</i>					XX								
<i>Scenedesmus arcuatus var. platyloca</i>					XX								
<i>Scenedesmus bijuga</i>			X		XX	X							
<i>Scenedesmus falcatus</i>					XX	X							
<i>Scenedesmus longus var. hazeli</i>					XX	X							
<i>Scenedesmus quadricauda</i>		X	XX	XX	XX	X							
<i>Scenedesmus quadricauda var. quadripina</i>			XX	XX	XX	X							
<i>Scenedesmus quadricauda var. Weisii</i>			XX	XX	XX	X							
<i>Antrodosmus falcatus</i>					XX	X							
<i>Antrodosmus spiralis</i>					XX	X							
<i>Leptodermis quadrilobum</i>			XX	XX	XX	X							
<i>Coelastrum microporum</i>			XX	XX	XX	X							
<i>Chlorella bionica</i>					XX	X							
<i>Chlorella thomborgii</i>					XX	X							
<i>Chlorella kutzingii</i>					XX	X							
<i>Chlorella moniliferum</i>					XX	X							
<i>Chlorella prorum</i>					XX	X							
<i>Staurastrum alternans</i>					XX	X							
<i>Staurastrum Brethmannii</i>					XX	X							
<i>Staurastrum tetrasarium var. validum</i>					XX	X							
<i>Melobesia granulata</i>			X	X	X	X							
<i>Melobesia italica</i>					X	X							
<i>Melobesia varians</i>										X			
<i>Cyclotella Meneghini</i>										X			X
<i>Asterionella formosa</i>										X			X
<i>Tabellaria fenestrata</i>									XX	XX	XX	XX	X
<i>Tabellaria flocculosa</i>									XX	XX	XX	XX	X
<i>Diatoma elongatum</i>	XX							XX	R	R	XX	XX	X
<i>Fragilaria capricornis</i>	XX							XX	R	R	XX	XX	X
<i>Fragilaria construens</i>	XX							XX	R	R	XX	XX	X
<i>Fragilaria crotonensis</i>	XX							XX	R	R	XX	XX	X
<i>Fragilaria pinnata</i>	XX							XX	R	R	XX	XX	X
<i>Synedra acis</i>	XX							XX	X	X	X	X	XX
<i>Synedra affinis</i>									X	X	X	X	XX
<i>Synedra capitata</i>									X	X	X	X	XX
<i>Synedra nana</i>									X	X	X	X	XX
<i>Synedra ulna</i>	X							X	XX	XX	XX	XX	X
<i>Fitzingeria acicularis</i>									XX	XX	XX	XX	X
<i>Fitzingeria sigmoides</i>													R
<i>Lyngbyella teleno</i>											R		R
<i>Microcystis aeruginosa</i>													R
<i>Microcystis flocculosa</i>													R
<i>Chroococcus elaberratus var. planostriatus</i>										X			R
<i>Chroococcus dispersus</i>													R
<i>Chroococcus dispersus var. minor</i>													R
<i>Chroococcus minutus</i>													R
<i>Coelastrum Kutzingianum</i>										R			R
<i>Coelastrum Haeghianum</i>										R			R
<i>Merismopedia elegans</i>											X		R
<i>Merismopedia punctata</i>											X		R
<i>Merismopedia tenuissima</i>											X		R
<i>Ullathoua angusta</i>									X		XX	XX	XX
<i>Ullathoua lanata</i>									X		XX	XX	XX
<i>Ullathoua glauca</i>									X		XX	XX	XX
<i>Trichocapsa divergens</i>									X	X	XX	XX	XX
<i>Botrydium Braunii</i>									X	X	XX	XX	XX
<i>Ceratium truncatella</i>									X	X	XX	XX	XX

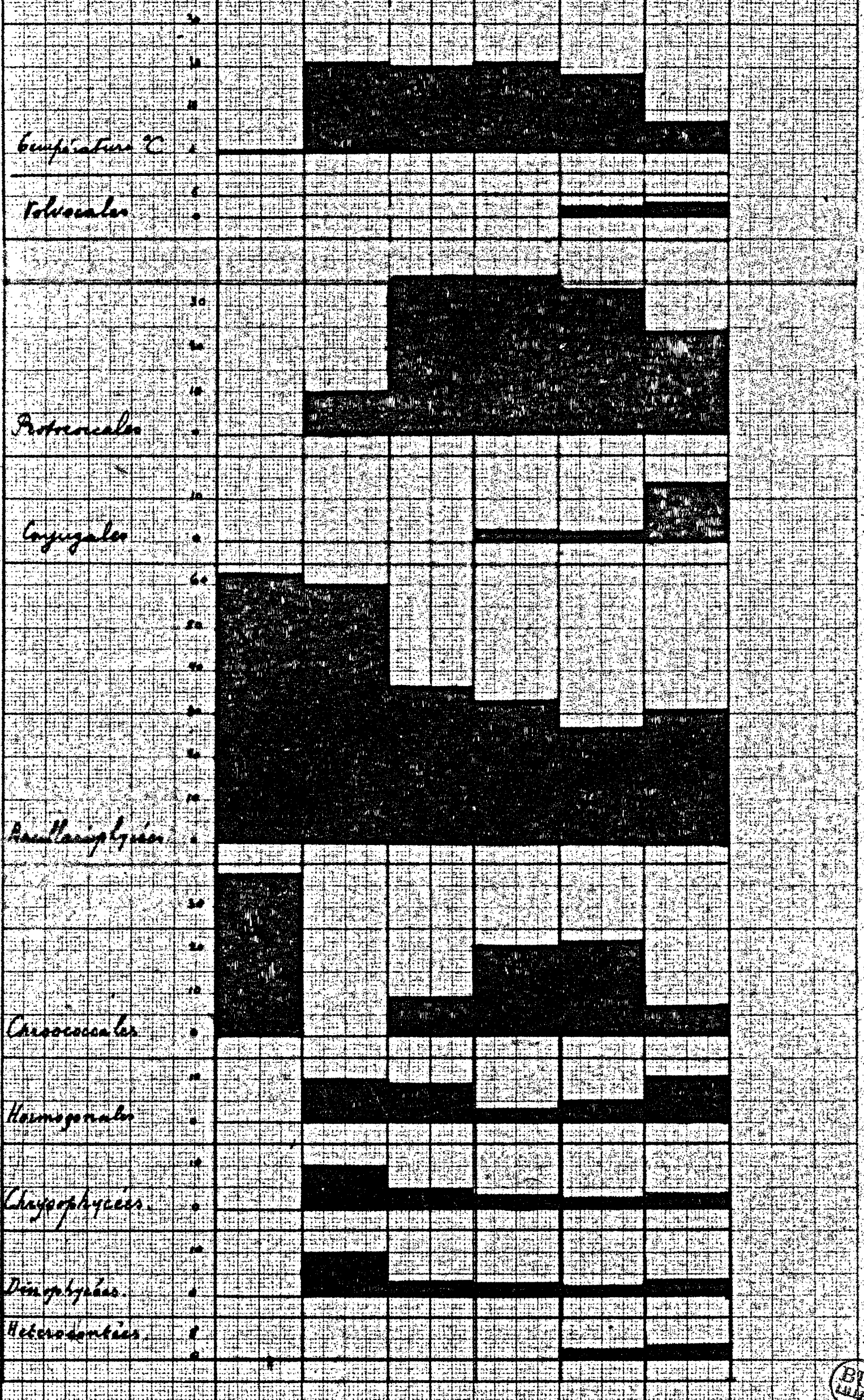


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FILE

# ETANG DE ROEUX

Répartition des groupes phytoplanctoniques

H	P		E		H
11.5.53	21.7.53	26.8.53	5.10.53	15.10.53	20.11.53
n° 430	n° 542	n° 581	n° 622	n° 655	n° 717



BU  
FILE





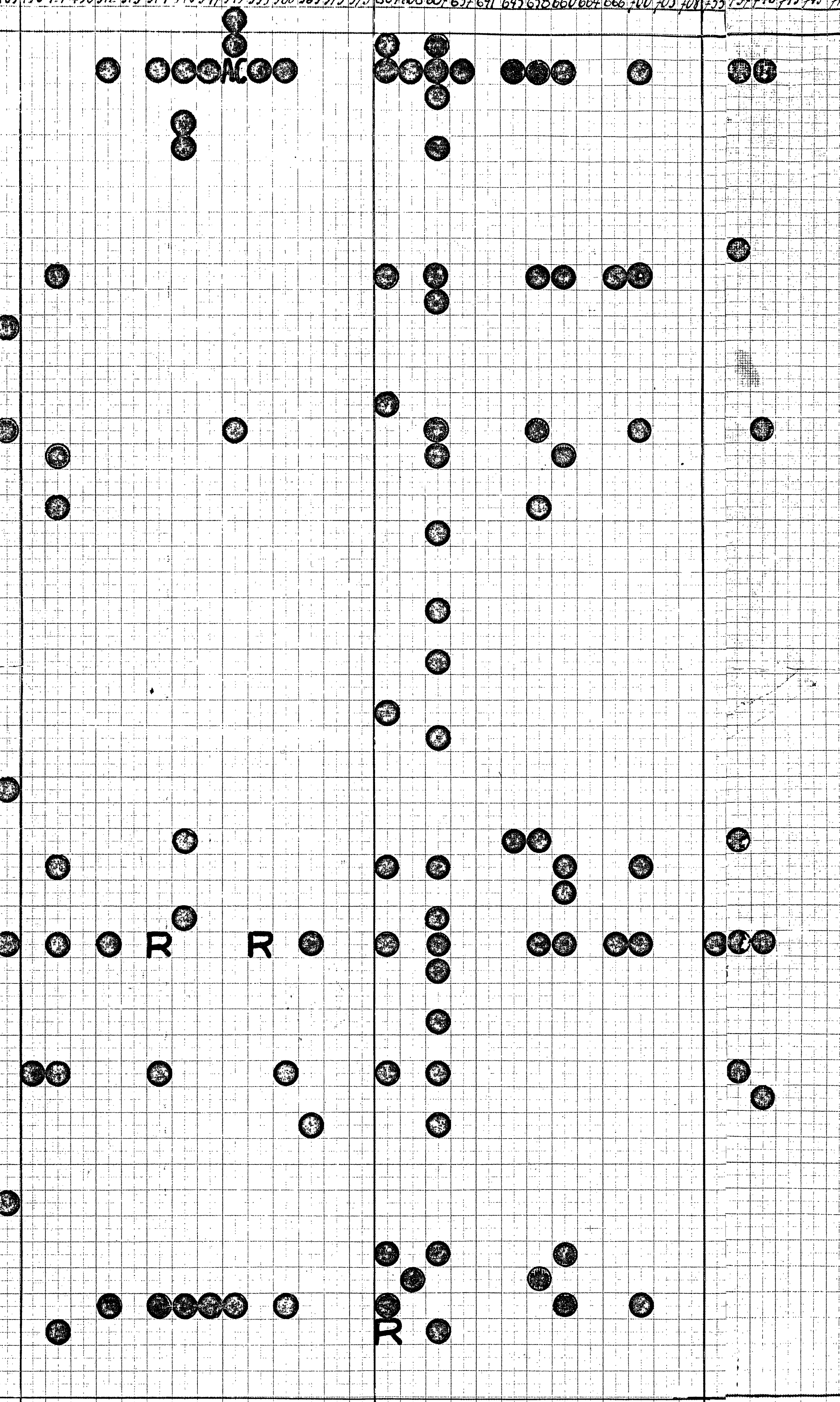


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P

E

Kills



PROTOCOCCALES



- 57. *Staurastrium tetraerum*
- 58. *Staurastrium tetraerum* var. *evolutum*
- 59. *Staurastrium tetraerum* var. *valatum*
- 60. *Staurastrium paradoxum*
- 61. *Staurastrium comatum* var. *rectangulare*

- 62. *Melonia varians*
- 63. *Melonia granulata*
- 64. *Melonia ambigua*
- 65. *Melonia italica*
- 66. *Cyclotella meneghinii*
- 67. *Cyclotella openulata*
- 68. *Cyclotella comta*
- 69. *Stiphanodinium estuaria*
- 70. *Stiphanodinium adriaca* var. *minutula*

- 71. *Isotriaeta flocculosa*
- 72. *Natona elongatum*
- 73. *Natona vulgare*
- 74. *Natona vulgare* var. *granulata*
- 75. *Flagellaria costatum* var. *bracteata*
- 76. *Flagellaria capensis*
- 77. *Flagellaria pinnata* var. *replata*
- 78. *Flagellaria intermedia*
- 79. *Determinella formosa*
- 80. *Synedra acus*
- 81. *Synedra acus* var. *raschiana*
- 82. *Synedra acus* var. *angustissima*
- 83. *Synedra affinis*
- 84. *Synedra capitata*
- 85. *Synedra ulva*
- 86. *Synedra ulva* var. *aequalis*
- 87. *Synedra ulva* var. *denisei*
- 88. *Synedra ulva* var. *spatulifera*

- 89. *Nitzschia acicularis*
- 90. *Nitzschia acuta*
- 91. *Nitzschia amphibia*
- 92. *Nitzschia angustata* var. *acuta*
- 93. *Nitzschia communis*
- 94. *Nitzschia dentacula*
- 95. *Nitzschia dimorpha*
- 96. *Nitzschia frustulum*
- 97. *Nitzschia lautzakiana*
- 98. *Nitzschia linearis*
- 99. *Nitzschia palau*
- 100. *Nitzschia pecta*
- 101. *Nitzschia umana*
- 102. *Nitzschia pseudobali*
- 103. *Nitzschia symoidea*
- 104. *Nitzschia peroniculans*

- 105. *Synatoplectura elliptica* var. *constricta*
- 106. *Synatoplectura solia*
- 107. *Surirella angusta*
- 108. *Surirella biseriata*
- 109. *Surirella elegans*
- 110. *Surirella robusta*
- 111. *Surirella robusta* var. *plumbeola*
- 112. *Campylodinium varians* var. *lebmanii* f. *lemane*

- 113. *Microraptor cerugium*
- 114. *Microraptor flos aquae*
- 115. *Aphanocepa delicatissima*
- 116. *Aphanocepa chalybeata*
- 117. *Aphanocepa chalybeata* var. *confusa*
- 118. *Chaocidium humistrans*
- 119. *Chaocidium minutum*

88

R

R

R

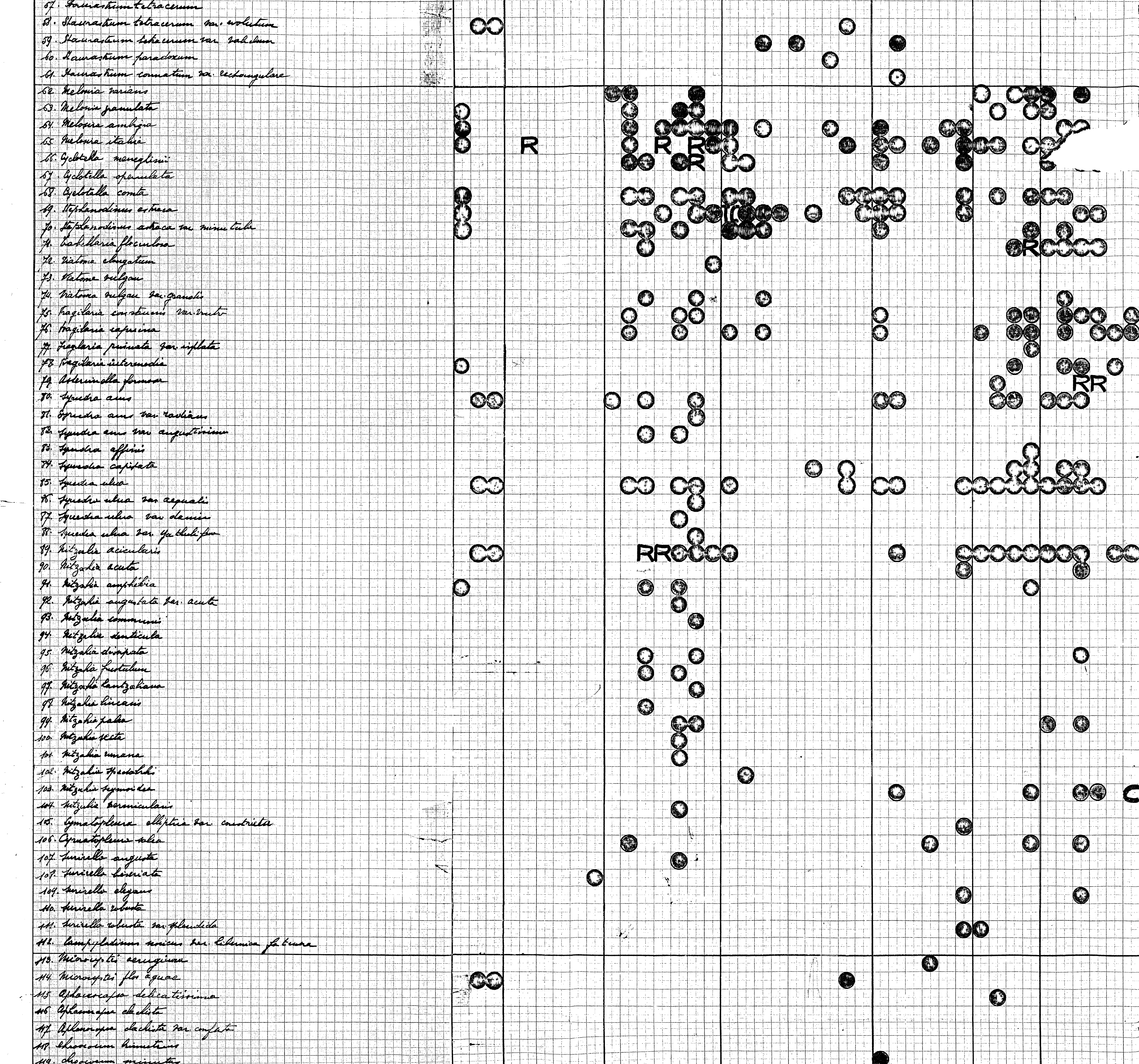
R

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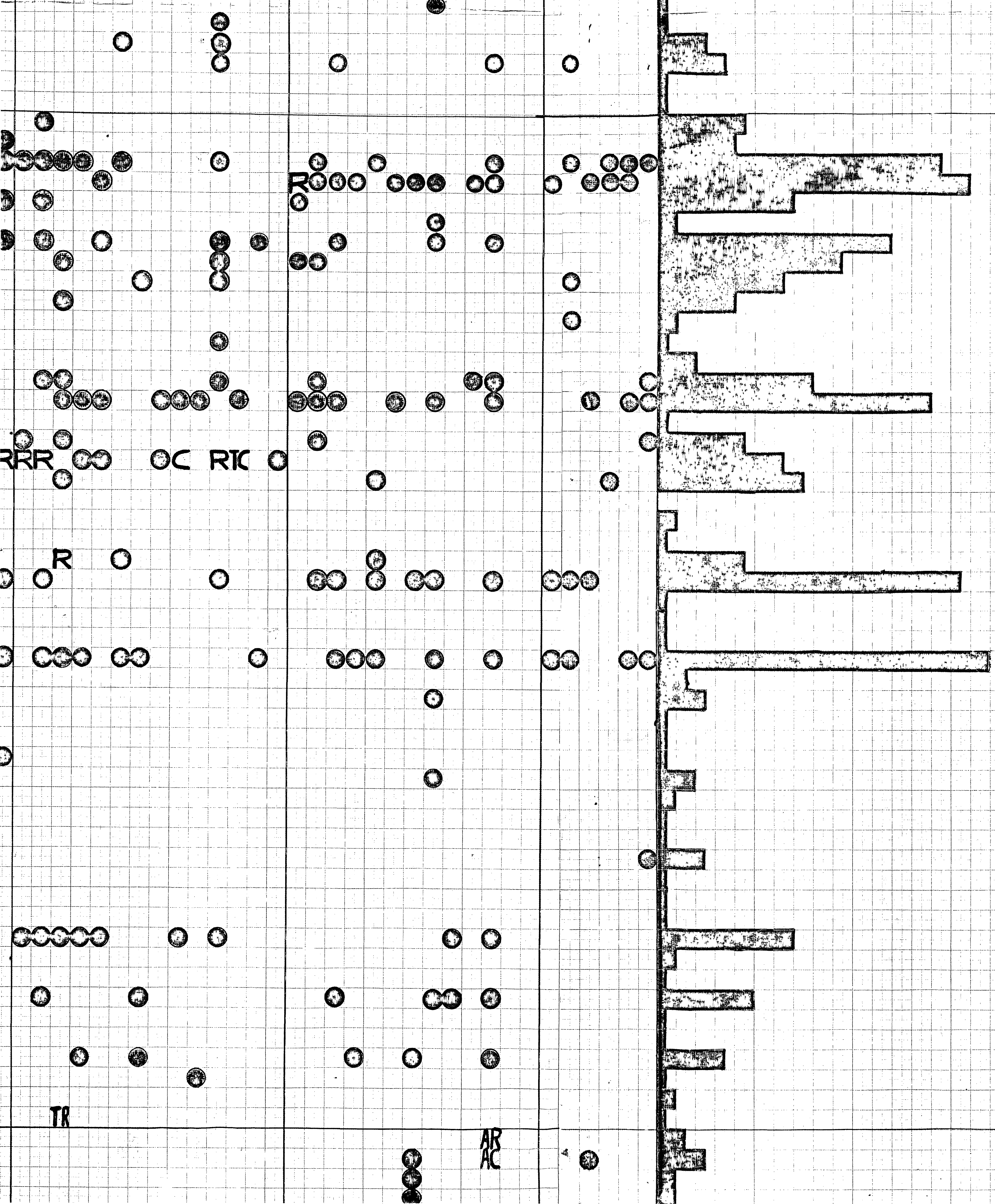
88





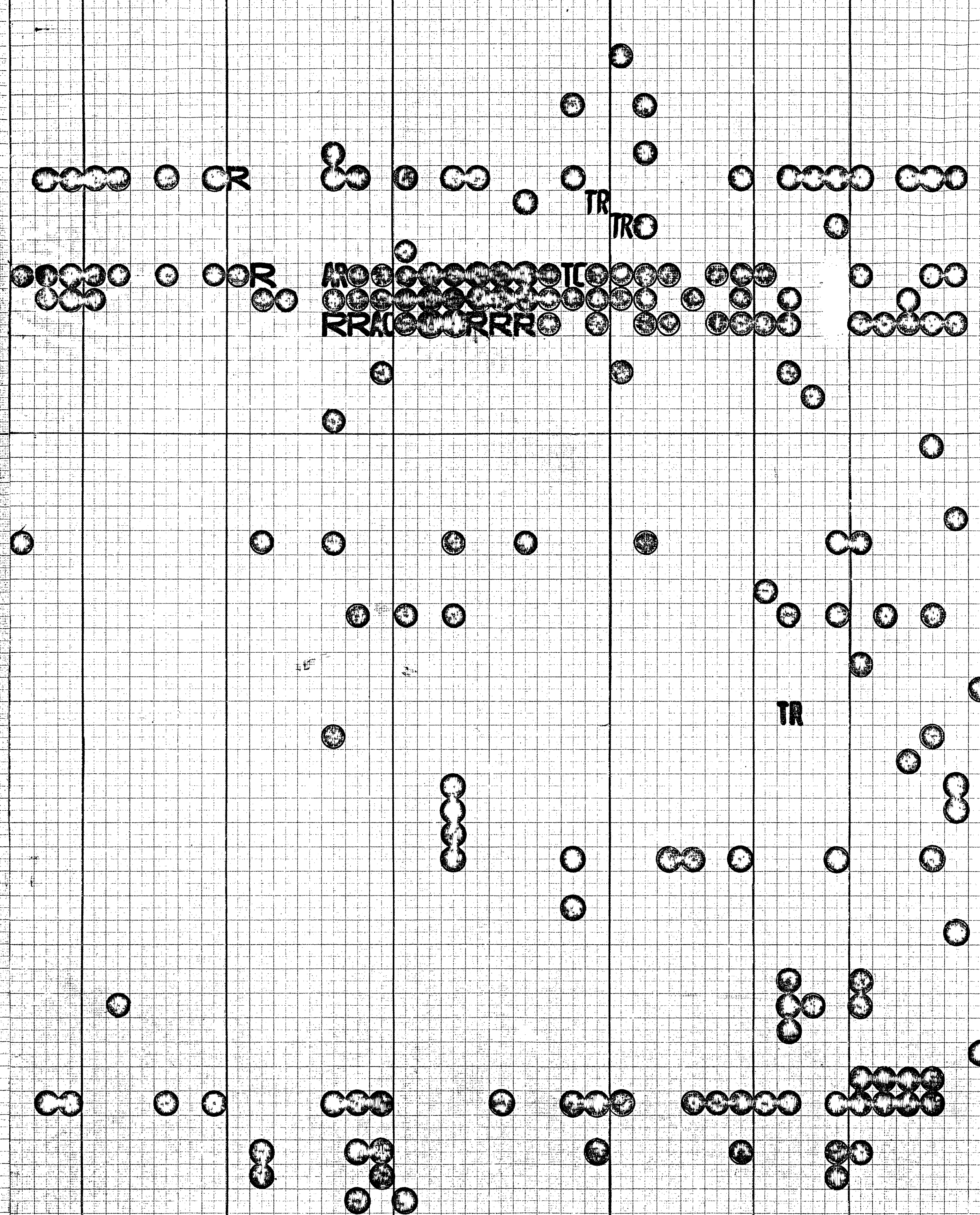
BACILLARIOPHYCEAE.

CY





- 117. *Phloeospora clachista* var. *confusa*
- 118. *Phloeospora humilis*
- 119. *Phloeospora minutus*
- 120. *Phloeospora rugidus*
- 121. *Loelophosium Nagehanum*
- 122. *Merimorphia punctata*
- 123. *Merimorphia tenuissima*
- 124. *Aphonissium gracile*
- 125. *Spirulina pennari*
- 126. *Spirulina major*
- 127. *Ocellularia aculeissima*
- 128. *Ocellularia aqueductus*
- 129. *Ocellularia angusta*
- 130. *Ocellularia sedeki*
- 131. *Ocellularia dalyka*
- 132. *Ocellularia linearis*
- 133. *Ocellularia tenuis*
- 134. *Ocellularia tenuis* var. *largestua*
- 135. *Microgynozia*
- 136. *Ceratium humulinella*
- 137. *Chrysosporium klebanus*
- 138. *Cyathium truncata*
- 139. *Engleria auris*
- 140. *Engleria proxima*
- 141. *Engleria auris* var. *engleriana*
- 142. *Engleria acutissima*
- 143. *Engleria davis*
- 144. *Engleria pineformis*
- 145. *Engleria spirigya* var. *abrupta acuminata*
- 146. *Gymmodium aeruginosum*
- 147. *Monia dangeardii*
- 148. *Peridinium cristatum*
- 149. *Peridinium cuninghamii*
- 150. *Peridinium palatinum*
- 151. *Thaicus contorta*
- 152. *Thaicus longicauda*
- 153. *Thaicus longicauda* var. *tata*
- 154. *Thaicus fujum*
- 155. *Thaicus tortus*
- 156. *Salpingica frequentissima*
- 157. *Trachelomonas flohosa*
- 158. *Trachelomonas dolocina*
- 159. *Trachelomonas dolocina* var. *flohosa*
- 160. *Mrogleria volvox*
- 161. *Spinna petersenii*
- 162. *Botryococcus braunii*
- 163. *Phobocoma minus*
- 164. *Reggianella alba*
- 165. *Chlorella macrophyta*
- 166. *Achromatium multifidum*



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ÉTANG D'ARDRES S. PH  
RÉP



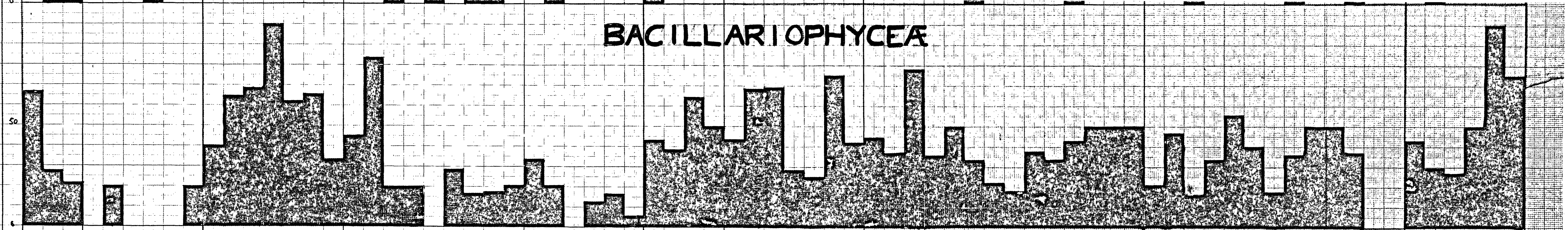




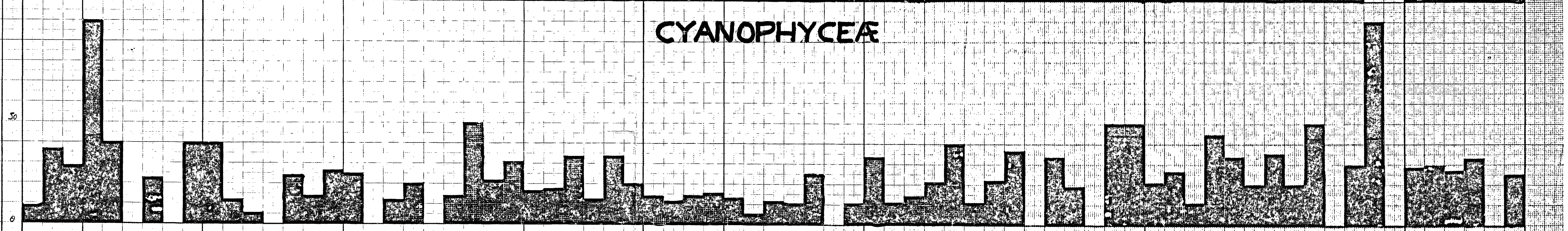




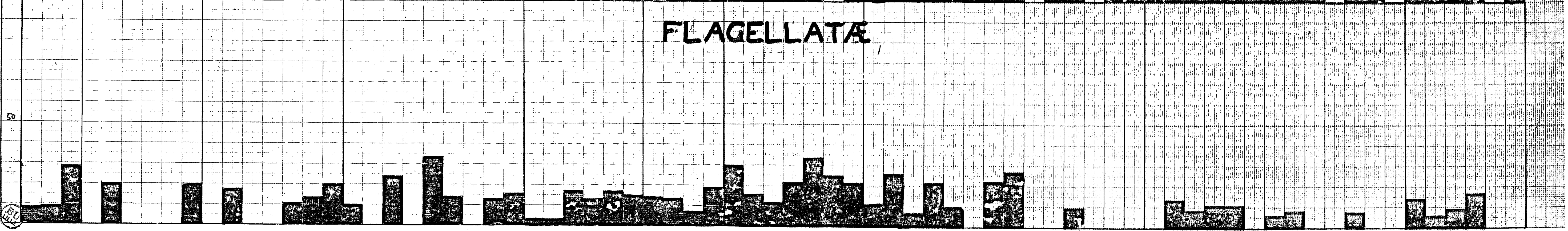
BACILLARIOPHYCEÆ



CYANOPHYCEÆ



FLAGELLATÆ









*Coelastrum cambricum* V. *intermedium*

*Coelastrum reticulatum*

*Selenastrum gracile*

*Selenastrum bibrainum*

*Selenastrum westii*

*Tetrastrum staurogeniaeforme*

*Closterium macilentum*

*Staurastrum tetracerum* V. *ovolutum*

*Staurastrum tetracerum* V. *validum*

*Melosira varians*

*Melosira granulata*

*Melosira granulata* V. *angustissima*

*Melosira ambigua*

*Melosira italica*

*Melosira italica* V. *tenuissima*

*Cyclotella meneghiniana*

*Cyclotella comta*

*Stephanodiscus astraea*

*Stephanodiscus astraea* V. *minutulus*

*Stephanodiscus hantzschii*

*Tabellaria flocculosa*

*Diatoma elongatum*

*Diatoma vulgare*

*Diatoma vulgare* V. *grandis*

*Fragilaria construens* + V. *venter*

*Fragilaria capucina*

*Fragilaria pinnata*

*Fragilaria intermedia*

*Asterionella formosa*

*Synedra acus*

*Synedra capitata*

*Synedra ulna*

*Synedra ulna* V. *aequalis*

*Synedra ulna* V. *danica*

*Nitzschia acicularis*

*Nitzschia acuta*

*Nitzschia amphibia*

*Nitzschia linearis*

*Nitzschia palea*

*Nitzschia sigmoidea*

*Nitzschia speetabilis*

*Nitzschia vermicularis*

*Cymatopleura elliptica*

*Cymatopleura solea*

*Surirella biseriata*

*Surirella biseriata* V. *bifrons*

*Surirella elegans*

*Surirella linearis*

*Surirella robusta*

*Surirella robusta* V. *splendida*

*Campylodiscus noricus*

*Microcystis aeruginosa*

*Microcystis flos-aquae*

*Microcystis incerta*

*Aphanocapsa delicatissima*

*Aphanocapsa clachista*

*Aphanocapsa clachista* V. *conferta*

*Aphanocapsa clachista* V. *planetonica*

*Aphanocapsa grevillei*

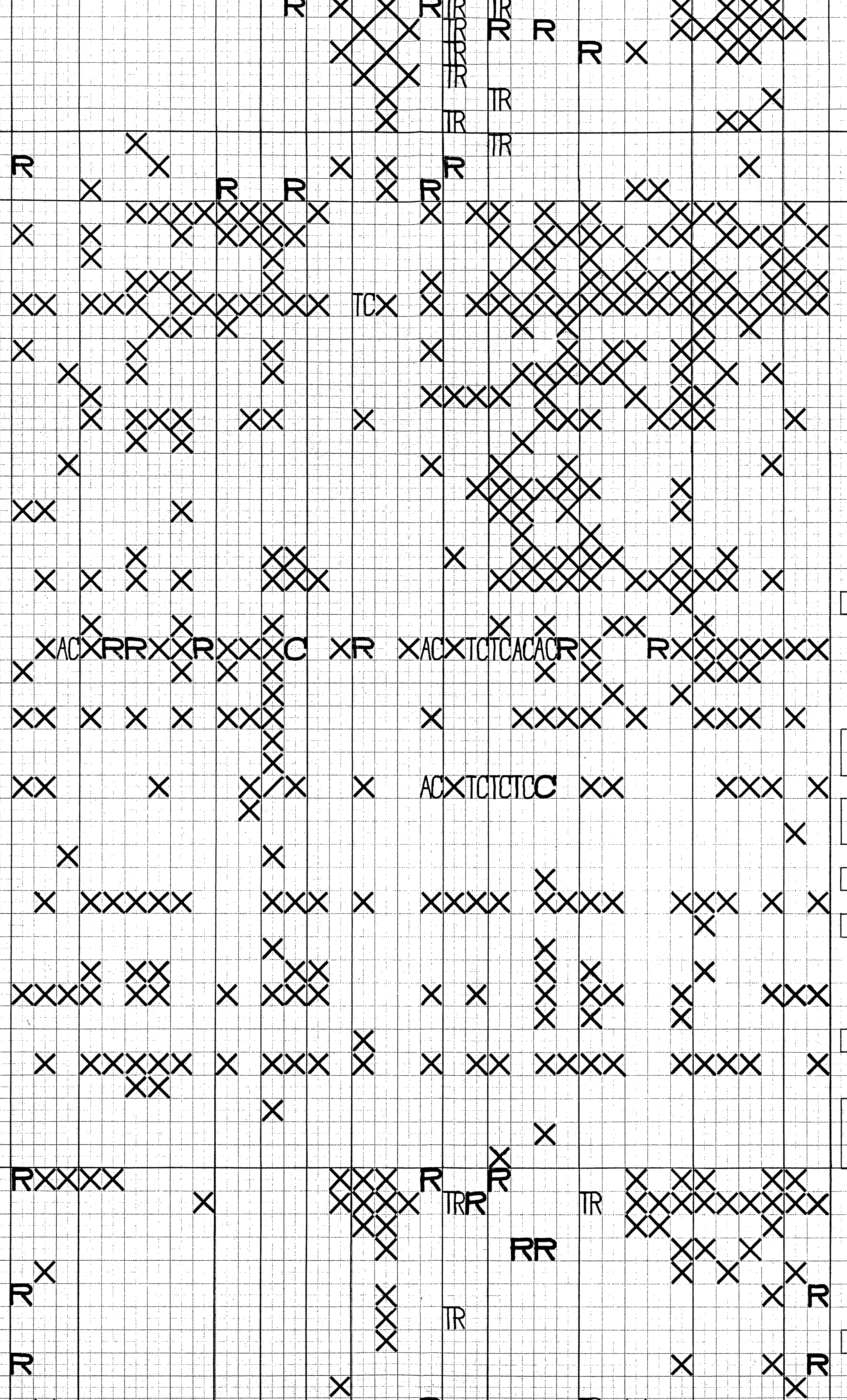
*Aphanocapsa rivuleris*

*Chroococcus dispersus*

CONJUGALES

BACILLARIOPHYCEAE

CYANOC









9  
**PHYTOPLANKTON**

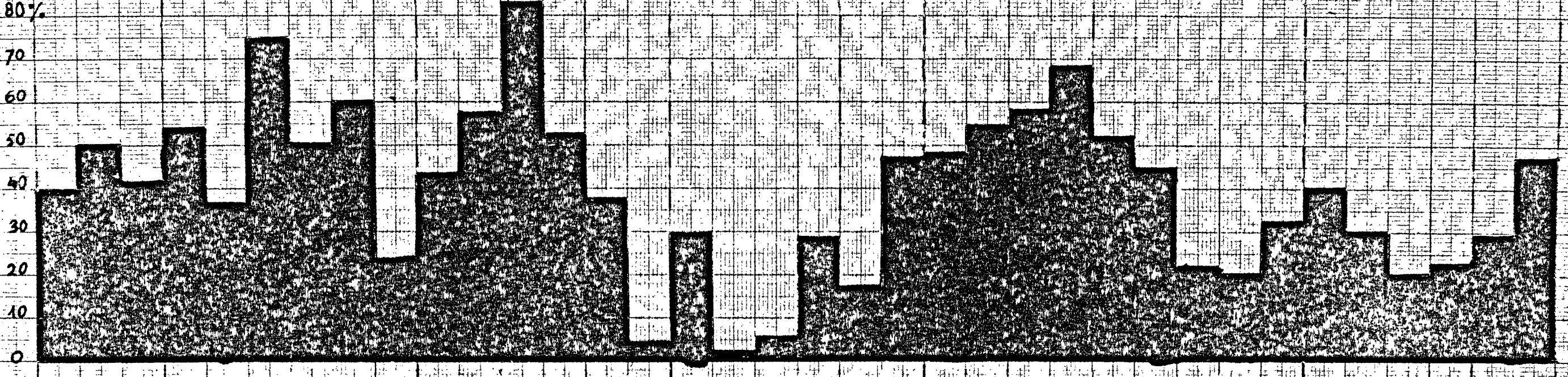
**ETANG DE BRÊMES**

HISTOGRAMMES DE FRÉQUENCE DES GROUPES.

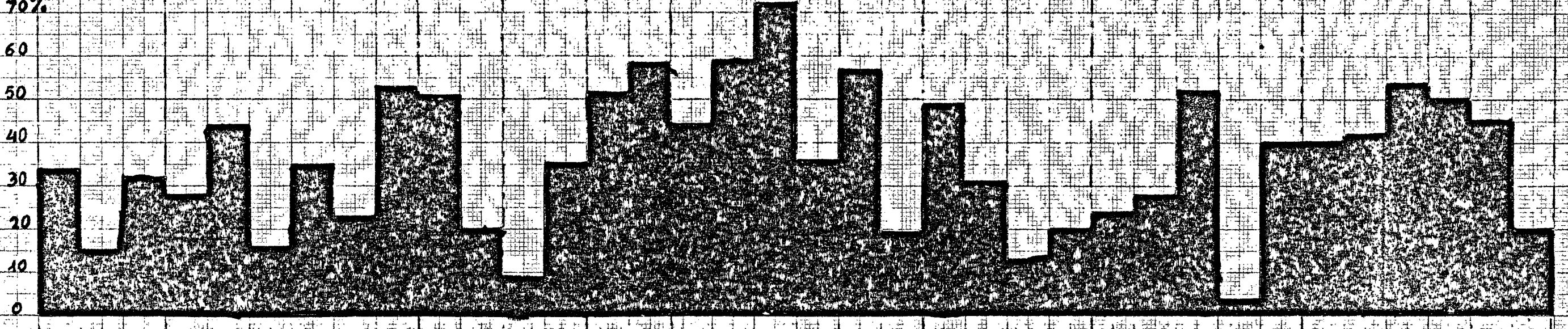
1951-1953

P E A H P E A H P E A

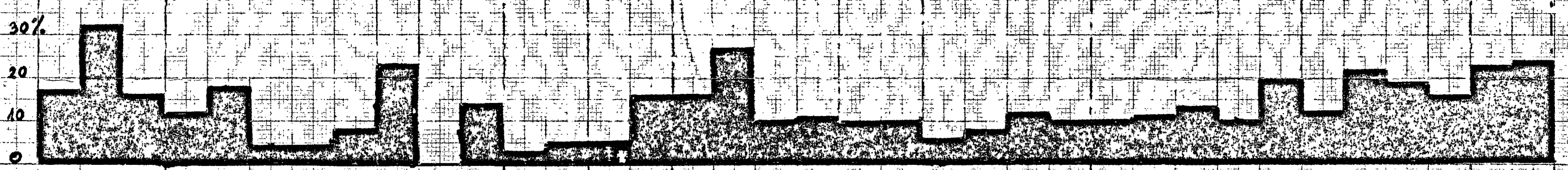
**BACILLARIOPHYCEÆ**



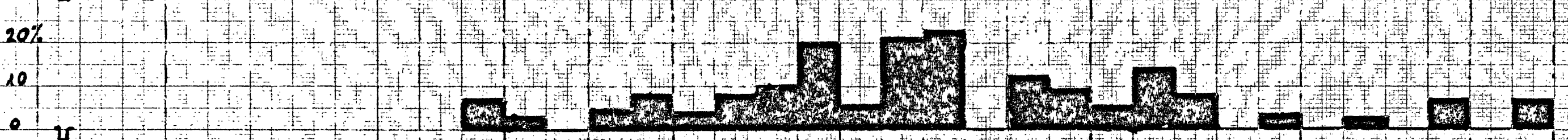
**PROTOCOCCALES**



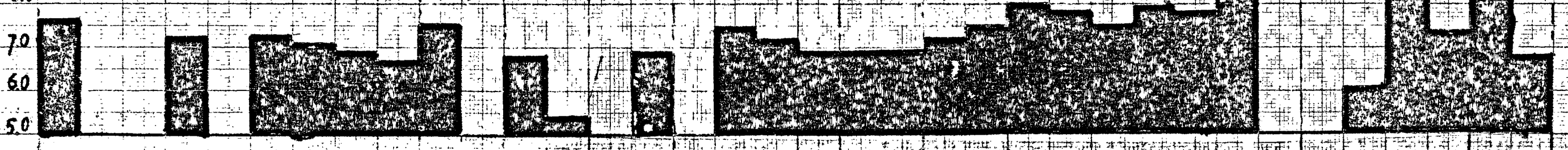
**CYANOPHYCEÆ**



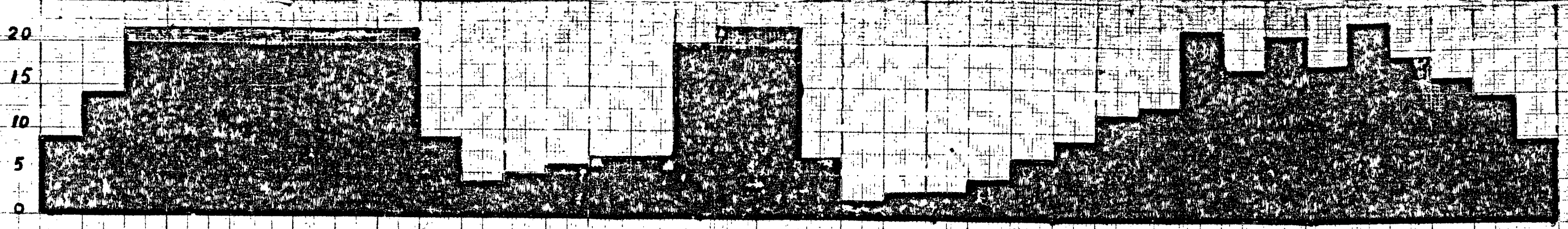
**FLAGELLATAE**



pH



25 °C





H P E A H P  
399 437 438 481 379 359 398 479 691 423 757 329 741 744 715 747 713 721 773 745 777 791 801 835

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

- 1. *Leptothrix articularis*
- 2. *Asterionella elegans*
- 3. *Sphaerocapsa abrotani*
- 4. *Pediastrum bogosense*
- 5. " *lythra*
- 6. " *r. dolabellum*
- 7. " *r. convergens*
- 8. " *r. stellatum*
- 9. " *telus*
- 10. *Ulothrix glacialis*
- 11. *Microcystis curta*
- 12. " *lunaris*
- 13. " *r. irregularis*
- 14. *Microcystis minimum*
- 15. *Coleoclema ventosum*
- 16. " *r. vicarium*
- 17. " *minimum*
- 18. " *regulare*
- 19. " *bibbittum*
- 20. *Sarcodotum arcuatum*
- 21. " *abundans* *r. agymmatica*
- 22. " *r. bicolorata*
- 23. " *lygia*
- 24. " *r. alternans*
- 25. " *denticulatus*
- 26. " *dimorphus*
- 27. " *lygia*
- 28. " *algosus*
- 29. " *ephorum*
- 30. " *quadricauda*
- 31. *Chlorella vulgaris*
- 32. *Uroptera longae*
- 33. " *laurentis*
- 34. *Leptothrix apiculata*
- 35. *Glebostridium Heintzenbergianum*
- 36. *Asterionella phaeo*
- 37. " *spiralis*
- 38. *Asterionella gracillimum*
- 39. *Styphlocapsa paludicola*
- 40. *Leptothrix mesoporum*
- 41. " *cambicum* *r. vorticaria*
- 42. *Sarcodotum bilobatum*
- 43. " *gracile*
- 44. *Chlorella dianae*
- 45. " *gracile* *var. elongatum*
- 46. " *buttingi*
- 47. " *multiforme*
- 48. *Sarcodotum arvicula*
- 49. " *deputum* *r. patens*
- 50. " *horacium*
- 51. " *tetrarium* *r. albidum*
- 52. *Microcystis nova* *r. subtenax*
- 53. *Junatopyx montanum*
- 54. *Melobesia granulata*
- 55. " *stahia*
- 56. " *varians*
- 57. *Cypridium comta*
- 58. " *kruglii*
- 59. *Leptothrix antarctica* *r. minima* *talit*
- 60. *Sarcodotum fuscicratis*
- 61. *Sarcodotum fuscicratis*
- 62. *Sarcodotum elongatum*
- 63. *Scenedesmus comboides*
- 64. " *capitata*
- 65. " *truncatum*
- 66. " *intermedia*
- 67. *Scenedesmus novus*
- 68. " *r. radiatus*
- 69. " *capitata*
- 70. " *ultra*
- 71. " *r. amphibryonum*
- 72. " *r. huxleyi*
- 73. " *sumptuosus*
- 74. *Microcystis acicularis*
- 75. " *amphibia*
- 76. " *denticulata*
- 77. " *folia*
- 78. " *symmetrica*
- 79. " *sermianensis*
- 80. *Cypridium ellipticum*
- 81. " *stria*
- 82. *Tricostema elegans*
- 83. *Microcystis flos aquae*
- 84. " *erecta*
- 85. *Ophiocapsa dichotomica*
- 86. " *clavata* *r. planctonica*
- 87. " *irregularis*
- 88. *Chroococcus diploides* *var. minor*
- 89. " *limbicus*
- 90. " *r. elongatus*
- 91. " *minimum*
- 92. " *minimum*
- 93. " *longus*
- 94. *Chlorella fuscicratis*
- 95. " *hagströmii*
- 96. *Microcystis elegans*
- 97. " *flava*
- 98. " *fimbriata*

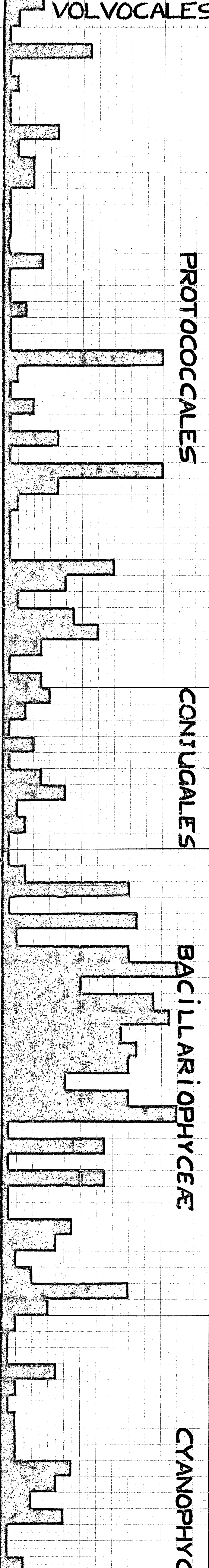
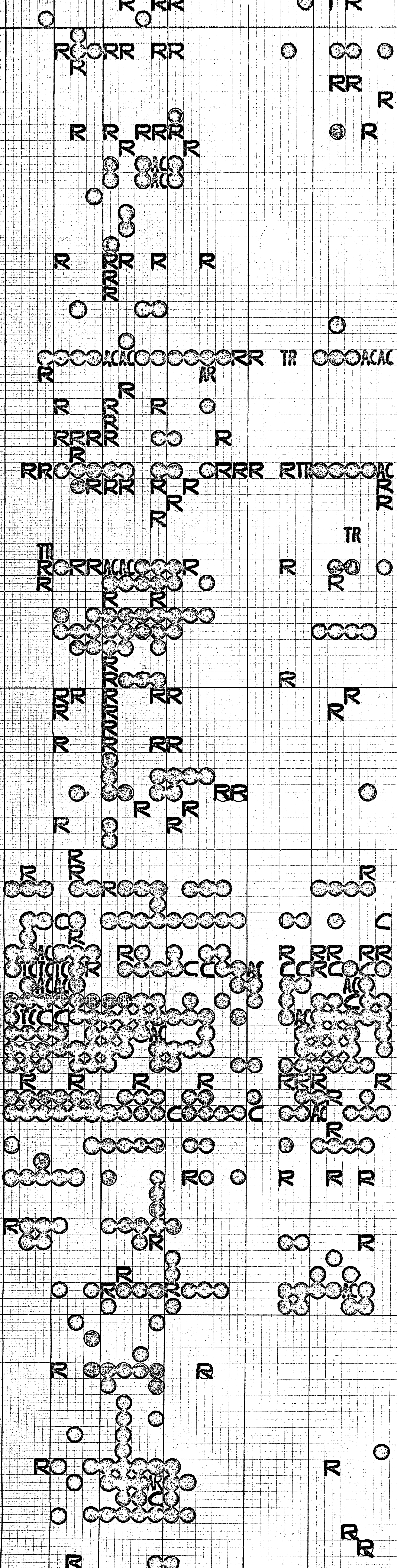
VOLVOCALES

PROTOCOCALES

CONTIGUALES

BACILLARIOPHYCEAE

CYANOPHYCEAE









CONJUGALES

BACILLARIO-  
PHYCEÆ

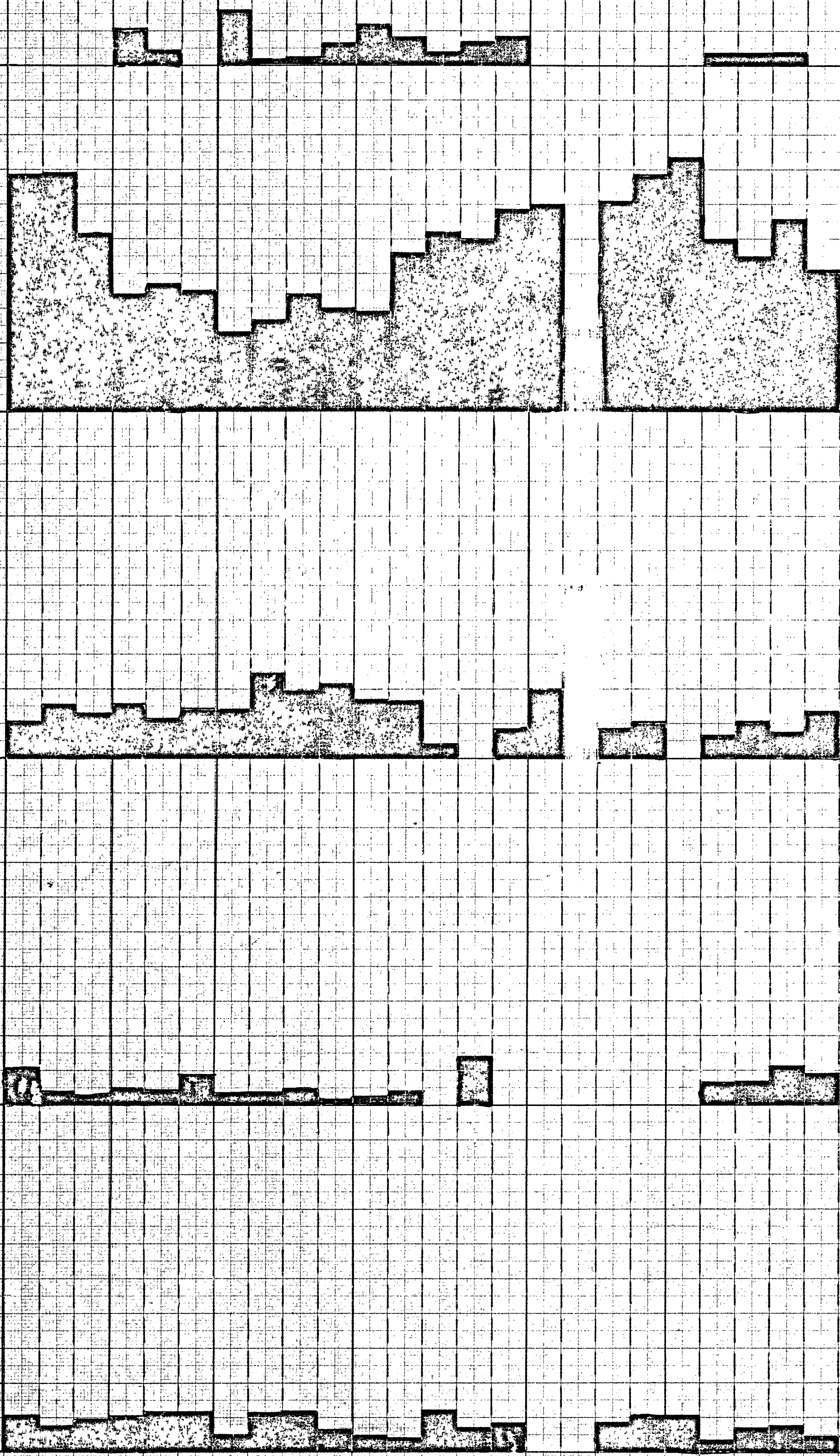
CYANOPHYCEÆ

FLAGELLATA

HETEROKONTA

ETANG DE BRIMEUX  
PHYTOPLANCTON

REPARTITION ET  
PERIODICITE

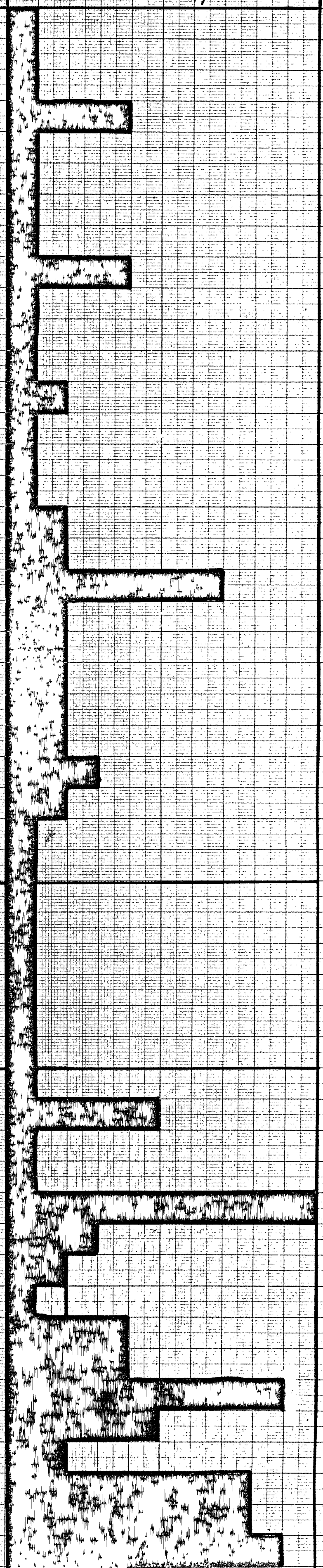




# PAVERY.

BU  
FILE

	310	413	487	489	535	588	620	689	745	754	1	2	3	4	5	6	7	8	9	10
<i>Vilva anensis</i>	XXXX																			
<i>Eudonia doganae</i>	XXXX																			
<i>Pediastrium biradiatum</i>	XXXX																			
<i>Pediastrium Boryanum</i>	XXXX			X			XX	X												
<i>Pediastrium Boryanum var. granulatum</i>	XXXX						XX	X												
<i>Pediastrium Boryanum var. perforatum</i>	XXXX				W															
<i>Pediastrium duplex var. clathratum</i>	XXXX							XXX												
<i>Pediastrium duplex var. reticulatum</i>	XXXX							XXX												
<i>Pediastrium Bohas</i>	X	W					W	XXX		X										
<i>Nephrosella lunari</i>	XXXX																			
<i>Prosergia minima</i>	XXXX																			
<i>Cochlostium minimum</i>	XXXX																			
<i>Scenedesmus arcuatus</i>	XXXX							X												
<i>Scenedesmus arcuatus var. platydica</i>	XXXX					C		X												
<i>Scenedesmus bryoga</i>	XXXX					X		X												
<i>Scenedesmus bryoga var. niatus</i>	XXXX					X		X												
<i>Scenedesmus carinatus</i>	XXXX							X	X											
<i>Scenedesmus obliquus</i>	XXXX							X	X											
<i>Scenedesmus quadricauda</i>	XXXX				R	X	X	X	X	X										
<i>Scenedesmus hystrix</i>	XXXX					X	X	XX	X	X										
<i>Chorella vulgaris</i>	XXXX						W	XX												
<i>Cocystis laevistri</i>	XXXX							W												
<i>Anthrodium falcate</i>	XXXX						X	X	X											
<i>Anthrodium spirale</i>	XXXX							X	X											
<i>Coclostium microporum</i>	XXXX							X	X											
<i>Coclostium cambriense var. intermedium</i>	XXXX							XX												
<i>Coclostium reticulatum</i>	XXXX							XX												
<i>Selenastrum gracile</i>	XXXX							X												
<i>Cloterium Braunhugii</i>	X																			
<i>Cloterium mouletianum</i>	X							X												
<i>Bosmidium aptogonum</i>	XXXX							X												
<i>Sphaerastrium Brebionii</i>	XXXX																			
<i>Sphaerastrium polymorphum</i>	XXXX																			
<i>Sphaerastrium tetraacuum var. validum</i>	XXXX							X												
<i>Melosia varians</i>	X																			
<i>Melosia granulata</i>	XXXX				X	X	X	XX	X											
<i>Melosia ambigua</i>	XXXX				X	X	X	XX	X											
<i>Melosia italica</i>	XXXX				X	X	X	XX	X											
<i>Cyclotella Monaghaniana</i>	XXXX	X	XXX	X	X	X	XXXX	X	X	X										
<i>Cyclotella comta</i>	XXXX							XXXX												
<i>Cyclotella testigigiana</i>	XXXX							XXXX												
<i>Staphanodiscus astraea</i>	XXXX							XXXX												
<i>Staphanodiscus astraea var. minutella</i>	XXXX							XXXX												
<i>Tabellaria fenestrata</i>	XXXX	XX	XXX	X	X	X	XXXX	X	X	X										
<i>Tabellaria florentina</i>	XXXX							XX	X	X										
<i>Thalassia elongatum</i>	XXXX							XX												
<i>Thalassia elongatum var. artusbröderi</i>	XXXX							XX												
<i>Fraxillaria cuneiformis + var. ventris</i>	XXXX	XXXX	XXX	XXX	X	X	XXXX	XX	X	XX										
<i>Fraxillaria capricornis</i>	XXXX							XX												
<i>Fraxillaria cristata</i>	XXXX							XX												



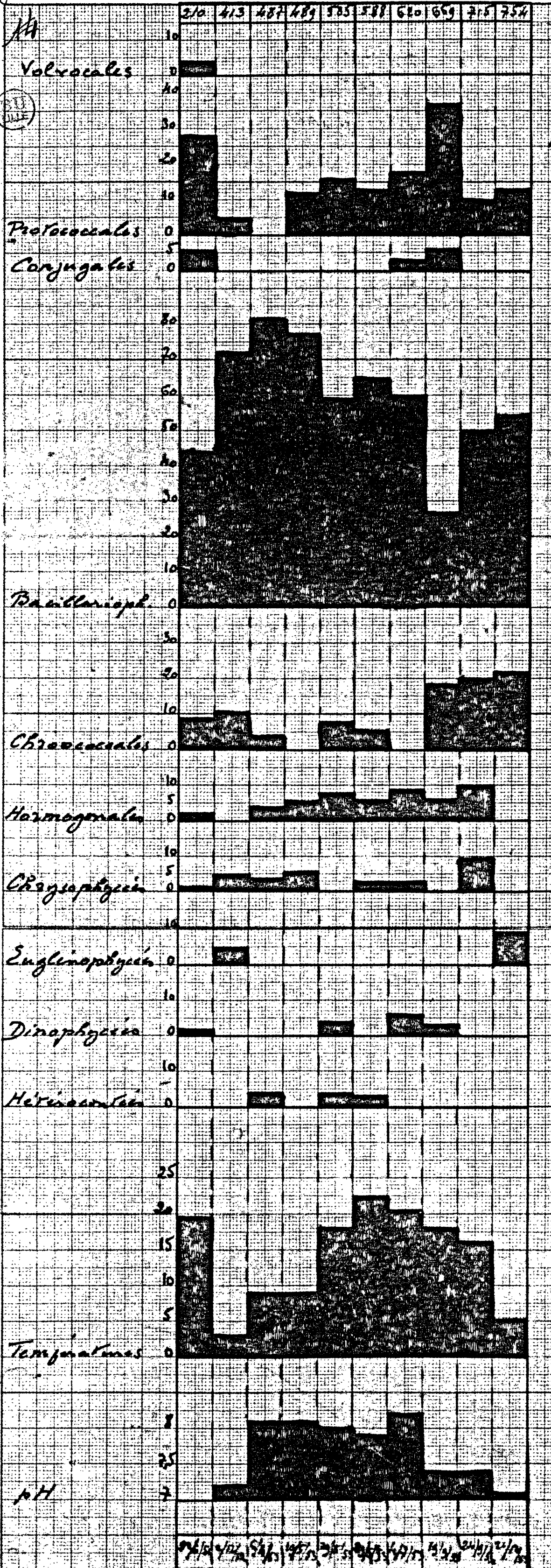






# BOVES

Repartition  
des groupes  
phytoplancton.

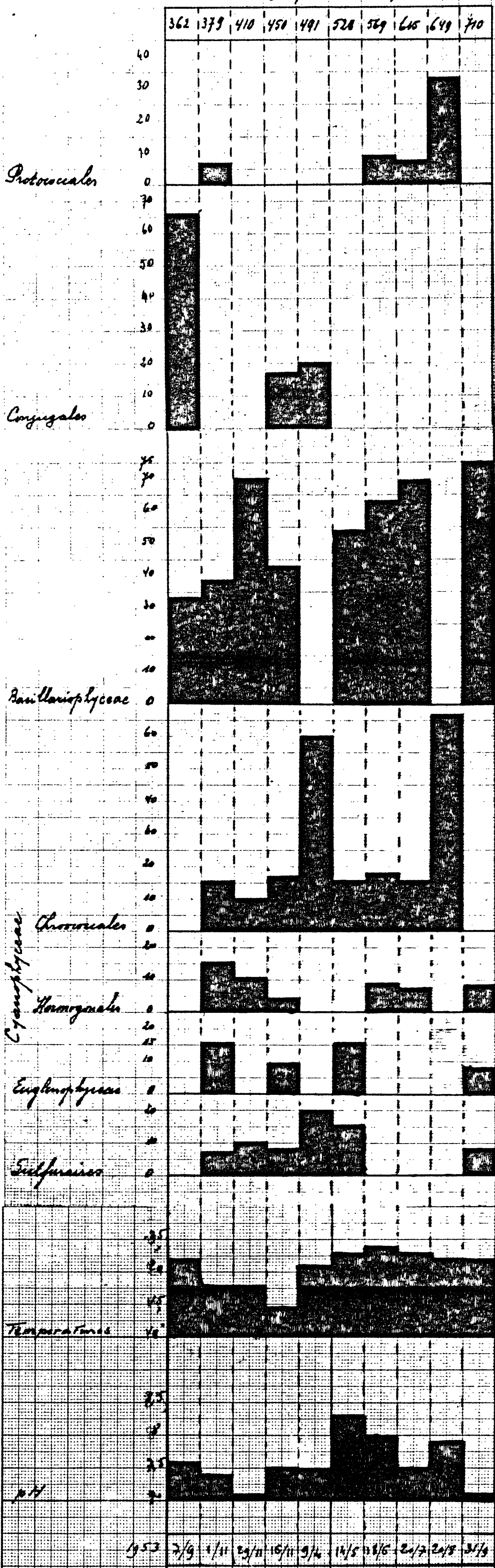








*Etangs de Saint Amand*  
*Bassin circulaire*  
*Fréquence des espèces dominantes*  
*phytoplanctoniques.*



1953 7/9 1/11 29/11 15/11 9/6 14/5 18/6 21/7 24/8 31/9



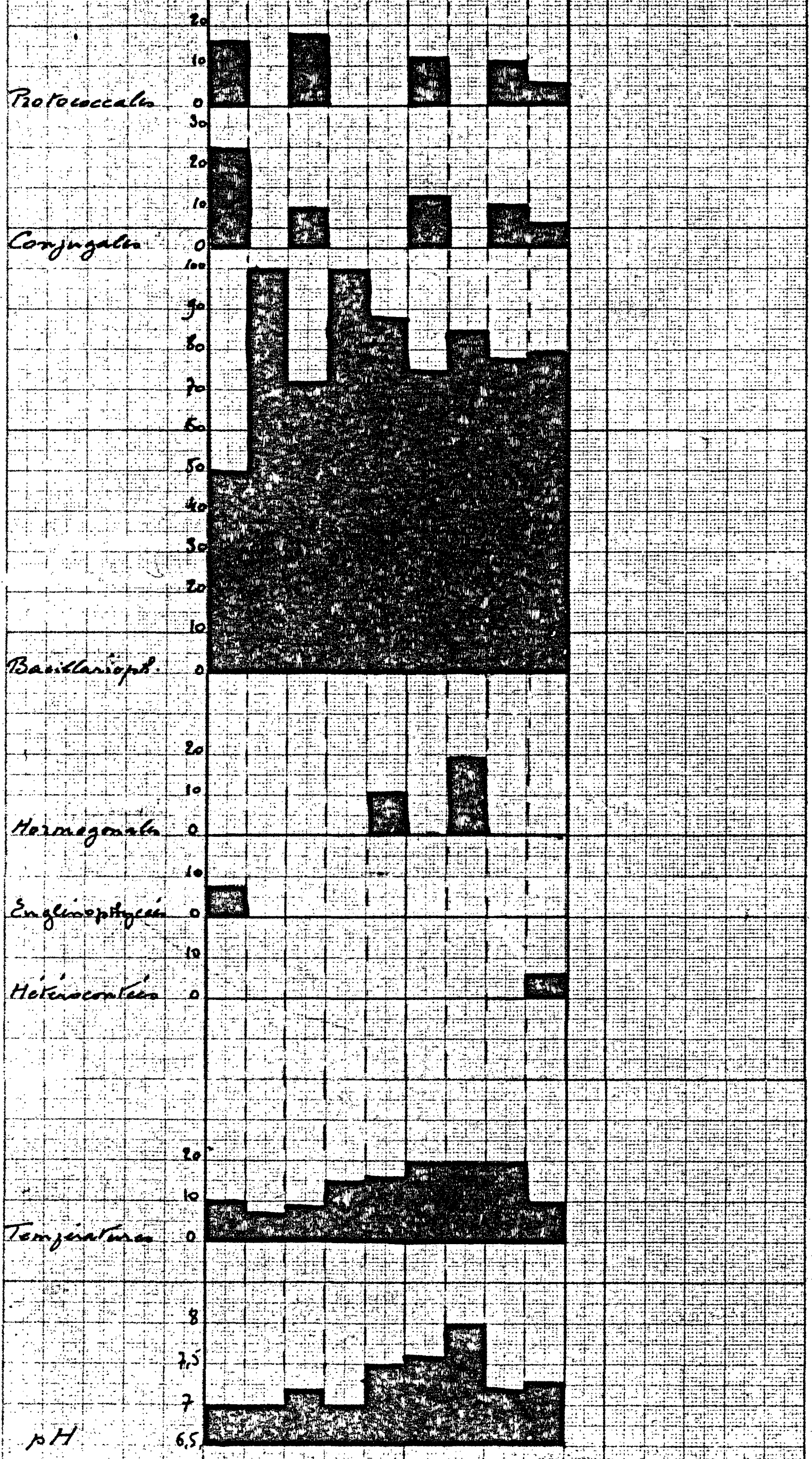


# SAINT-AMAND

(Étang de la Pelonne)

Répartition des groupes phytoplanctoniques

363 407 451 496 526 570 616 650 712





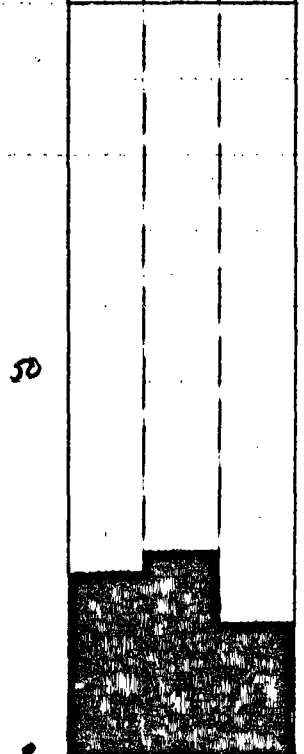
# ETANG DE RUMEAU-COURT EPIPHYTES

1952 - 1953

## POTAMOSETON LUCENS.

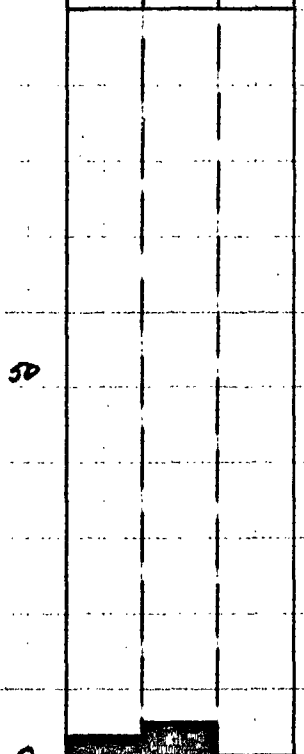
*Achnanthes* sp.

% 636 678 722



*Cocconeis placentula* var. *anglypta*

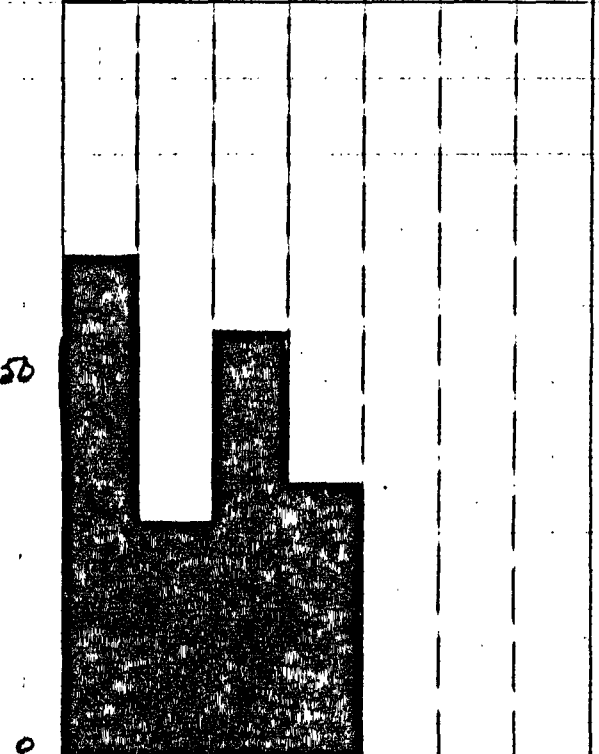
% 636 678 722



## MYRIOPHYLLUM SPICATUM

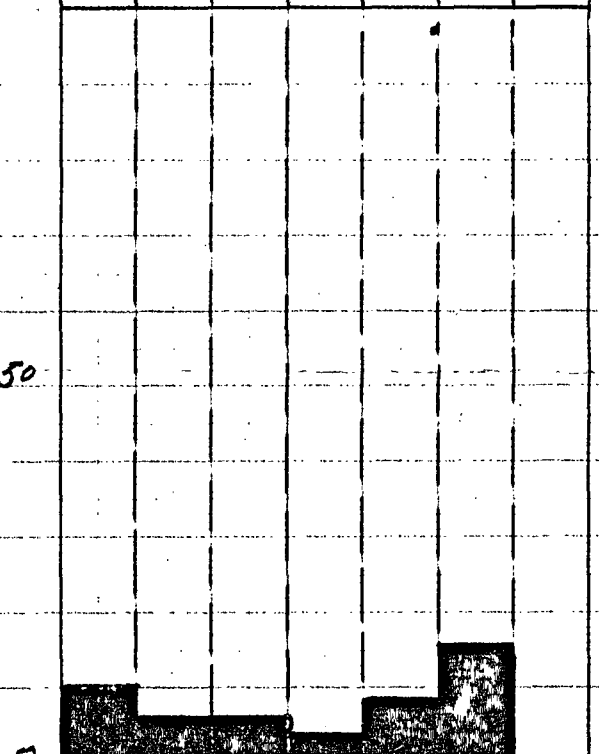
*Achnanthes* sp.

% 397 436 480 506 552 596 634



*Achnanthes minutissima* var. *oviscapitata*

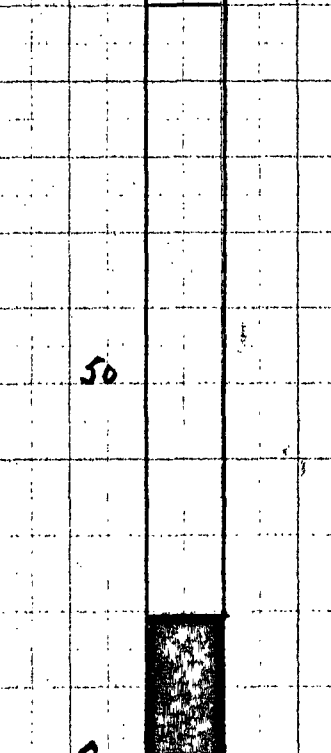
% 397 436 480 506 552 596 634



## POTAMOSETON PERFOLIATUS

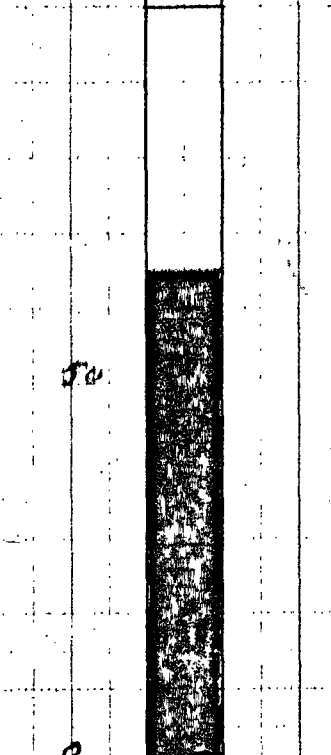
*Achnanthes* sp.

% 633



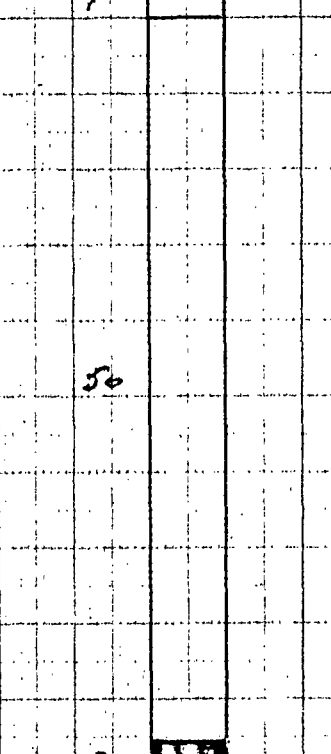
*Cocconeis placentula* var. *anglypta*

% 633



*Emutia arcus*

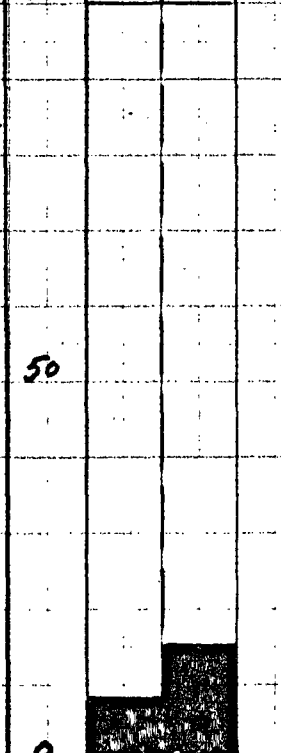
% 633



## CERATOPHYLLUM DEMERSUM

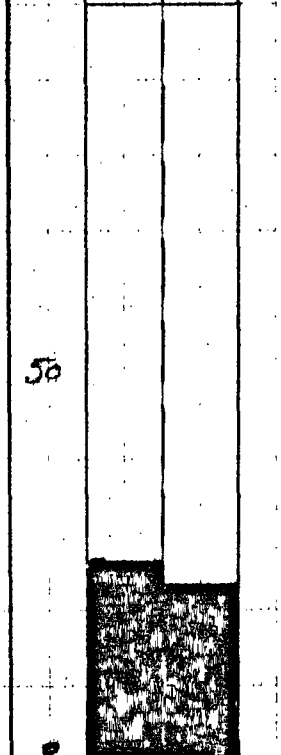
*Achnanthes* sp.

% 635 676



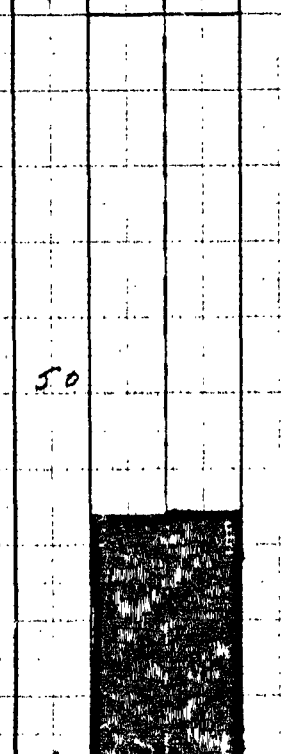
*Cocconeis placentula*

% 635 676



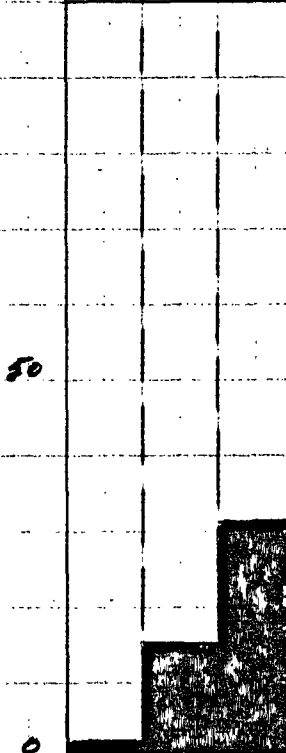
*Emutia arcus*

% 635 676



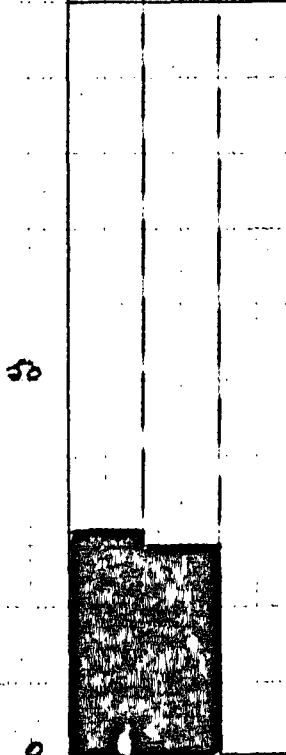
*Epithemia zebra*

% 635 678 722



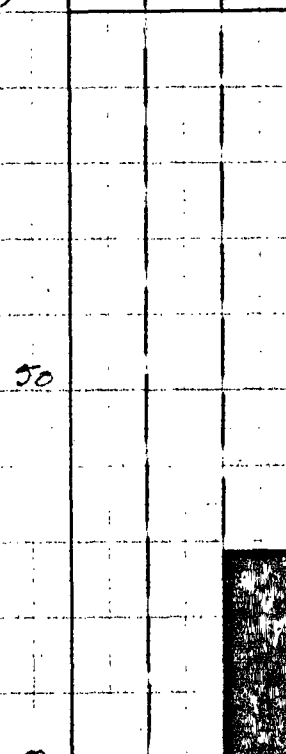
*Emutia arcus*

% 635 678 722



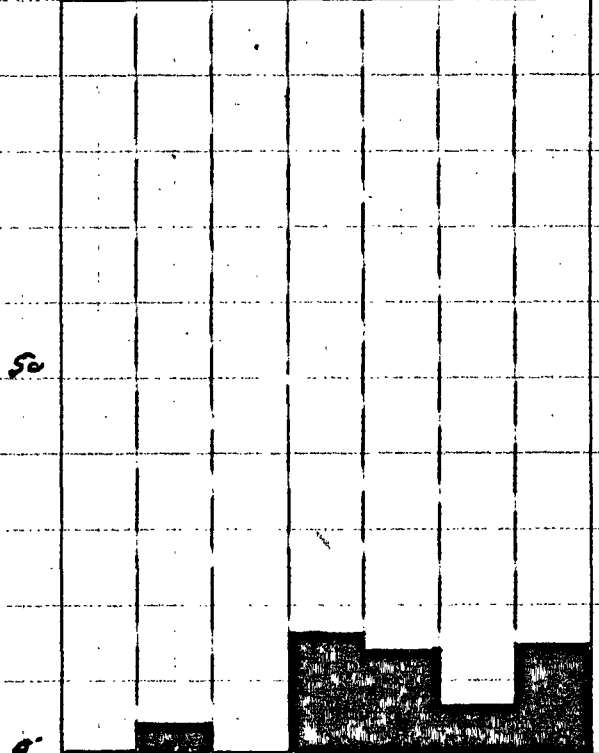
*Gomphonema longicauda* var. *subtilareola*

% 635 678 722



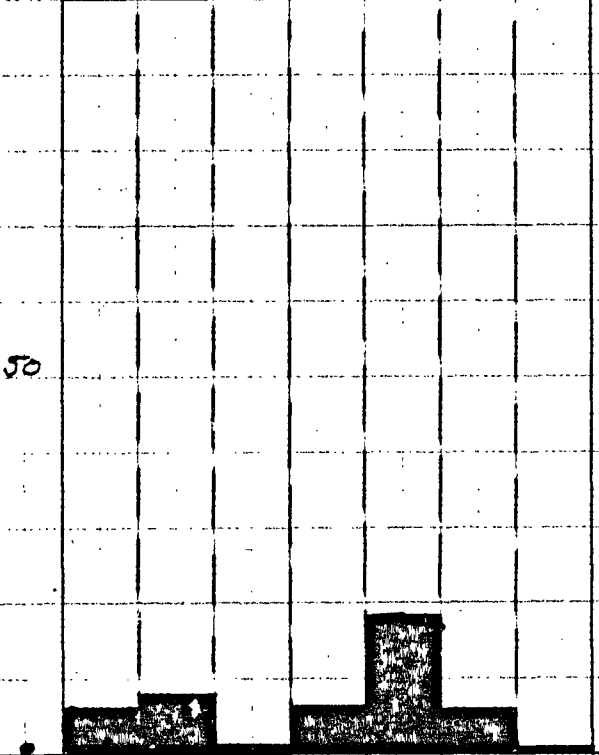
*Cocconeis placentula*

% 397 436 480 506 552 596 634



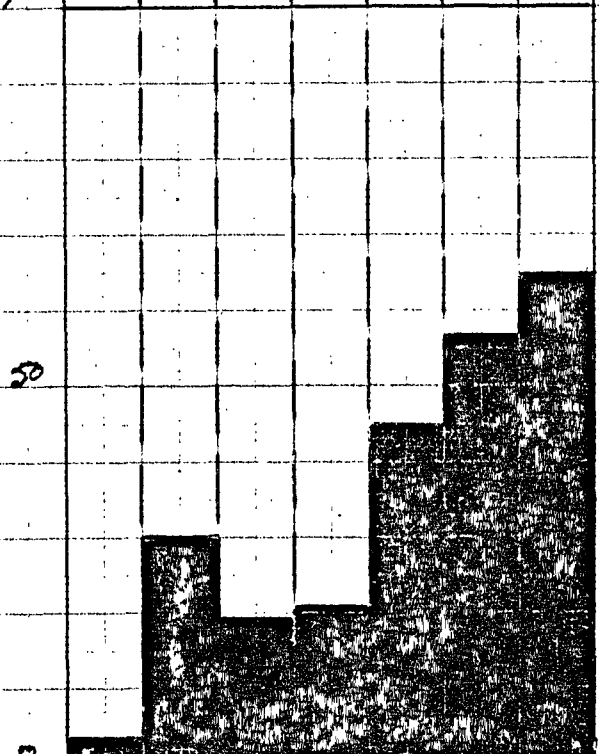
*Denticula tenuis*

% 397 436 480 506 552 596 634



*Emutia arcus*

% 397 436 480 506 552 596 634





BU  
LINE

# ROEUX-EPIPHYTES. 1953.

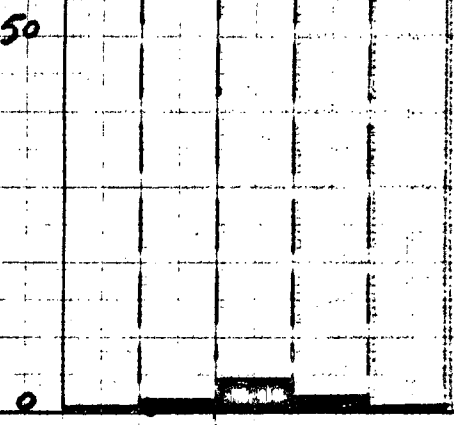
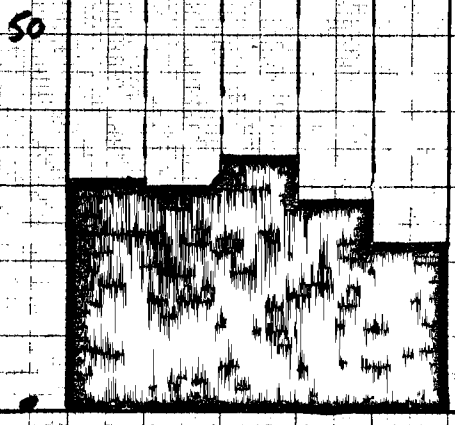
## MYRIOPHYLLUM SPICATUM

*Achnanthes*  
sp.

*Cymbella*  
*prostrata*

% 543 583 624 692 749

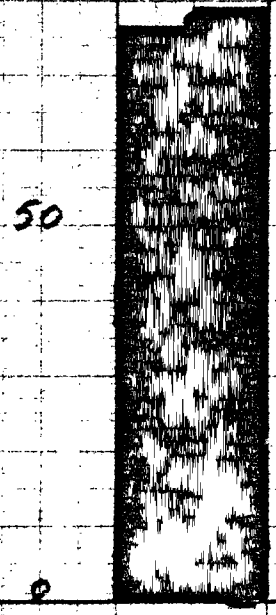
% 543 583 624 692 749



## ELODEA CANADENSIS

*Cocconeis*  
*placentula*

% 627 752



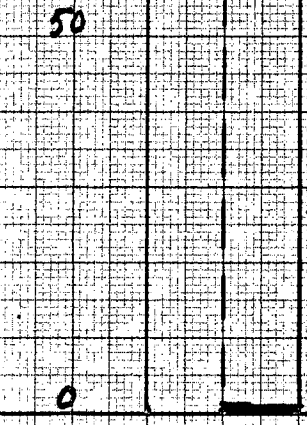
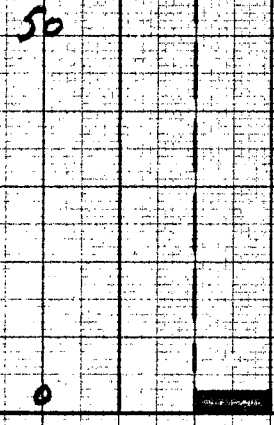
## CERATOPHYLLUM DEMERSUM

*Achnanthes*  
sp.

*Eunotia*  
*arcus*

% 628 694

% 628 694



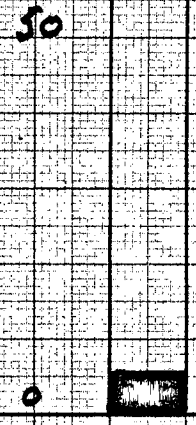
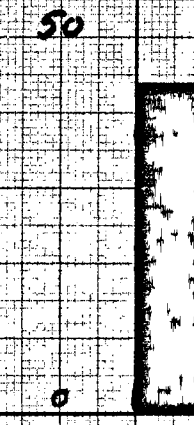
## POTAMOGETON NATANS

*Achnanthes*  
sp.

*Cymbella*  
*ventricosa*

% 691

% 691

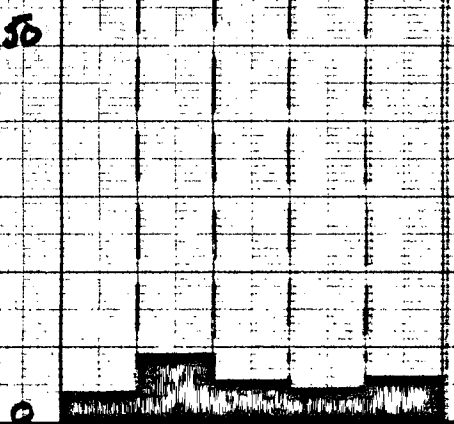
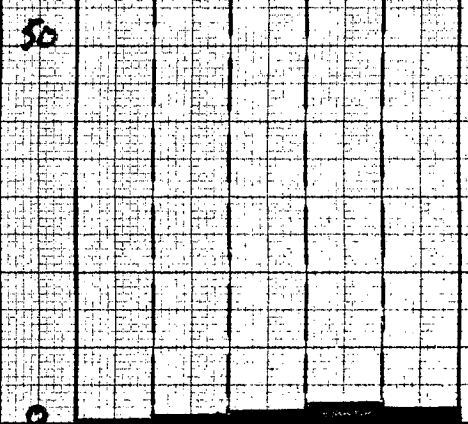


*Achnanthes*  
*minutissima*

*Cymbella*  
*ventricosa*

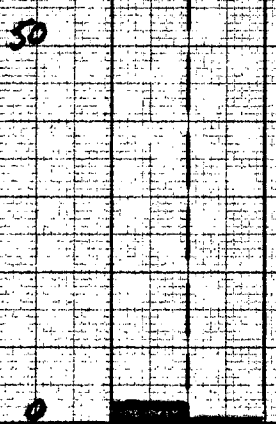
% 543 583 624 692 749

% 543 583 624 692 749



*Eunotia*  
*arcus*

% 627 752

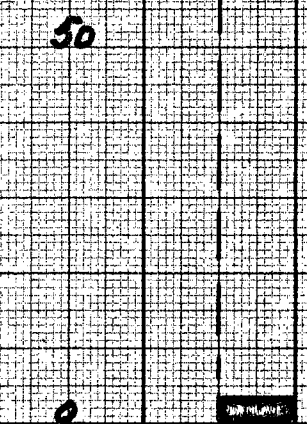
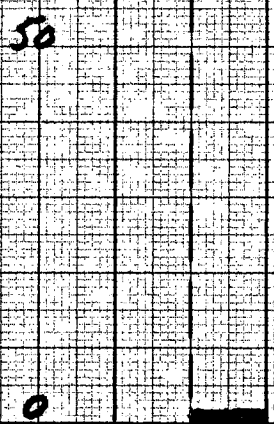


*Amphipleura*  
*pellucida*

*Navicula*  
*cryptocephala*

% 628 694

% 628 694

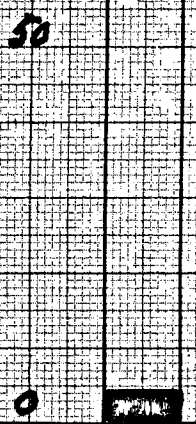
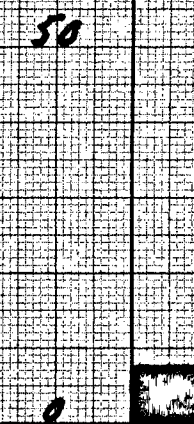


*Achnanthes*  
*minutissima*

*Navicula*  
*tenuis*

% 691

% 691

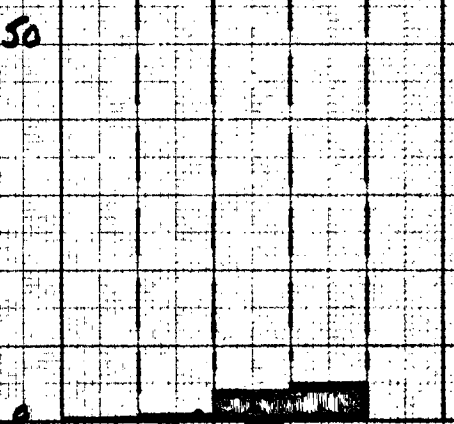
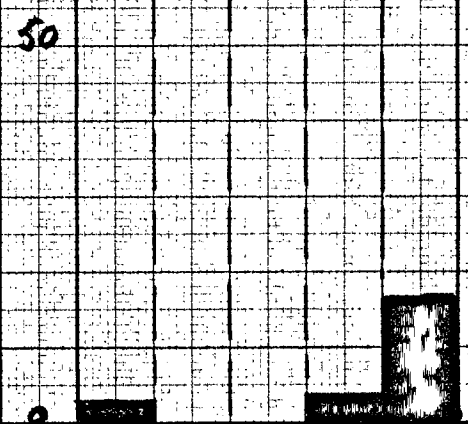


*Cocconeis*  
*placentula*

*Navicula*  
*tenuis*

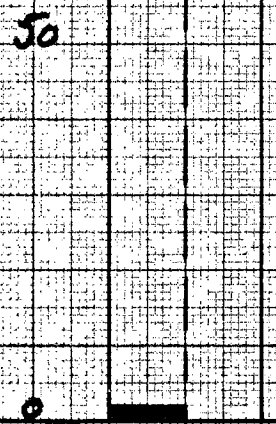
% 543 583 624 692 749

% 543 583 624 692 749



*Navicula*  
*cryptocephala*

% 627 752

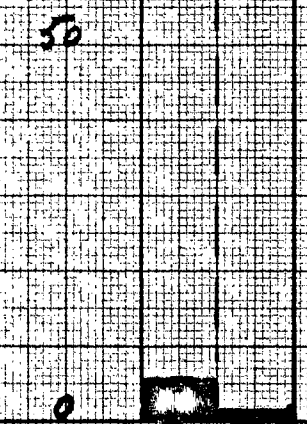
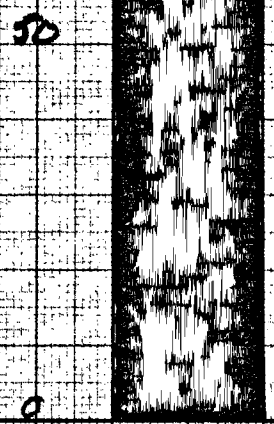


*Cocconeis*  
*placentula*

*Rhicosphenia*  
*curvata*

% 628 694

% 628 694

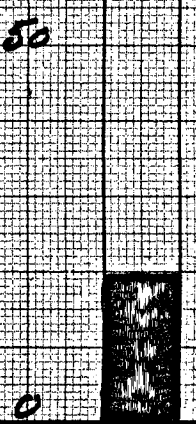
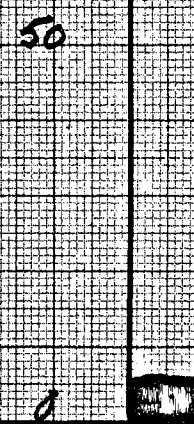


*Cocconeis*  
*placentula*

*Eunotia*  
*arcus*

% 691

% 691

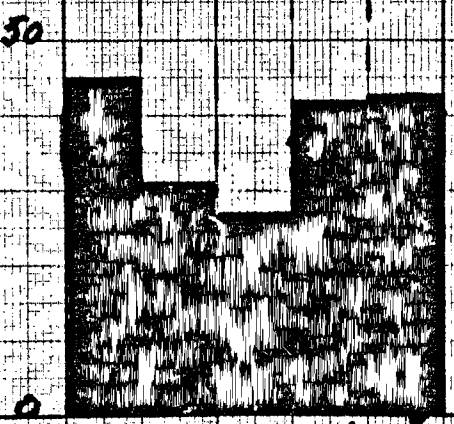
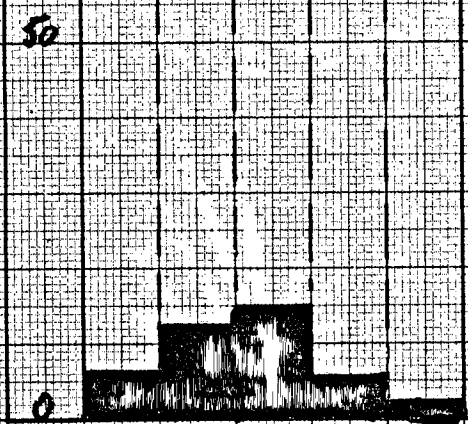


*Cymbella*  
*microcephala*

*Eunotia*  
*arcus*

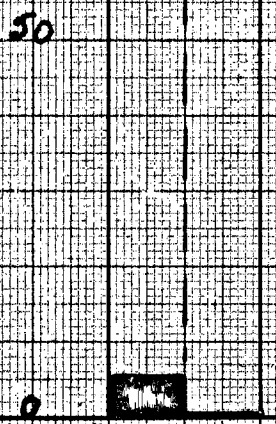
% 543 583 624 692 749

% 543 583 624 692 749



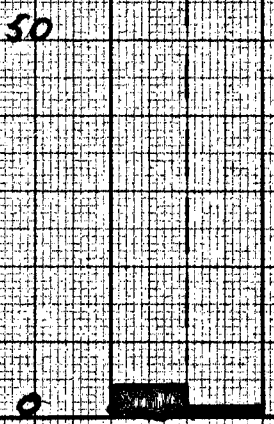
*Rhicosphenia*  
*curvata*

% 627 752



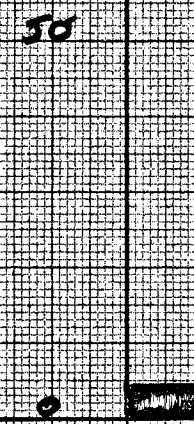
*Epithemia*  
*sores*

% 628 694



*Cymbella*  
*prostrata*

% 691



BU  
LINE

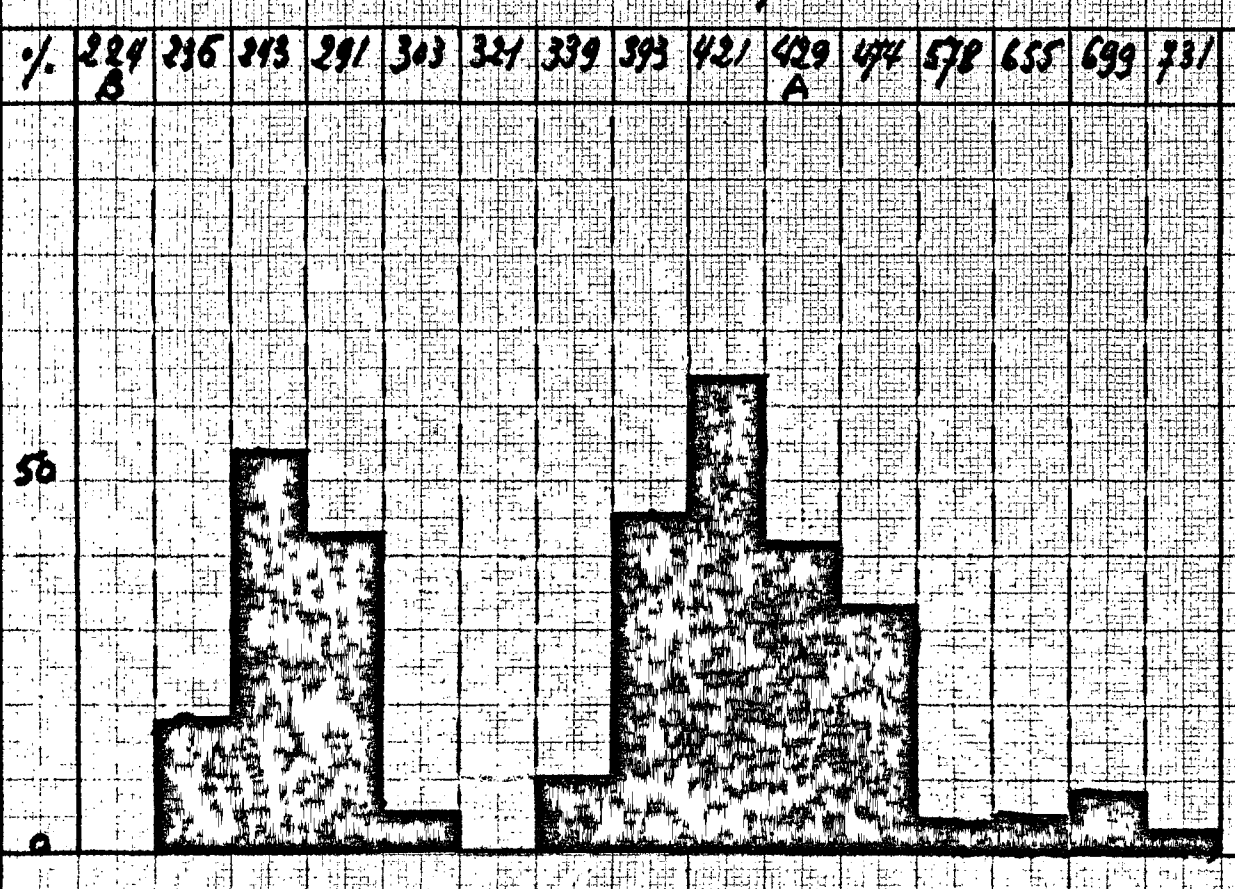


BUT  
FILE

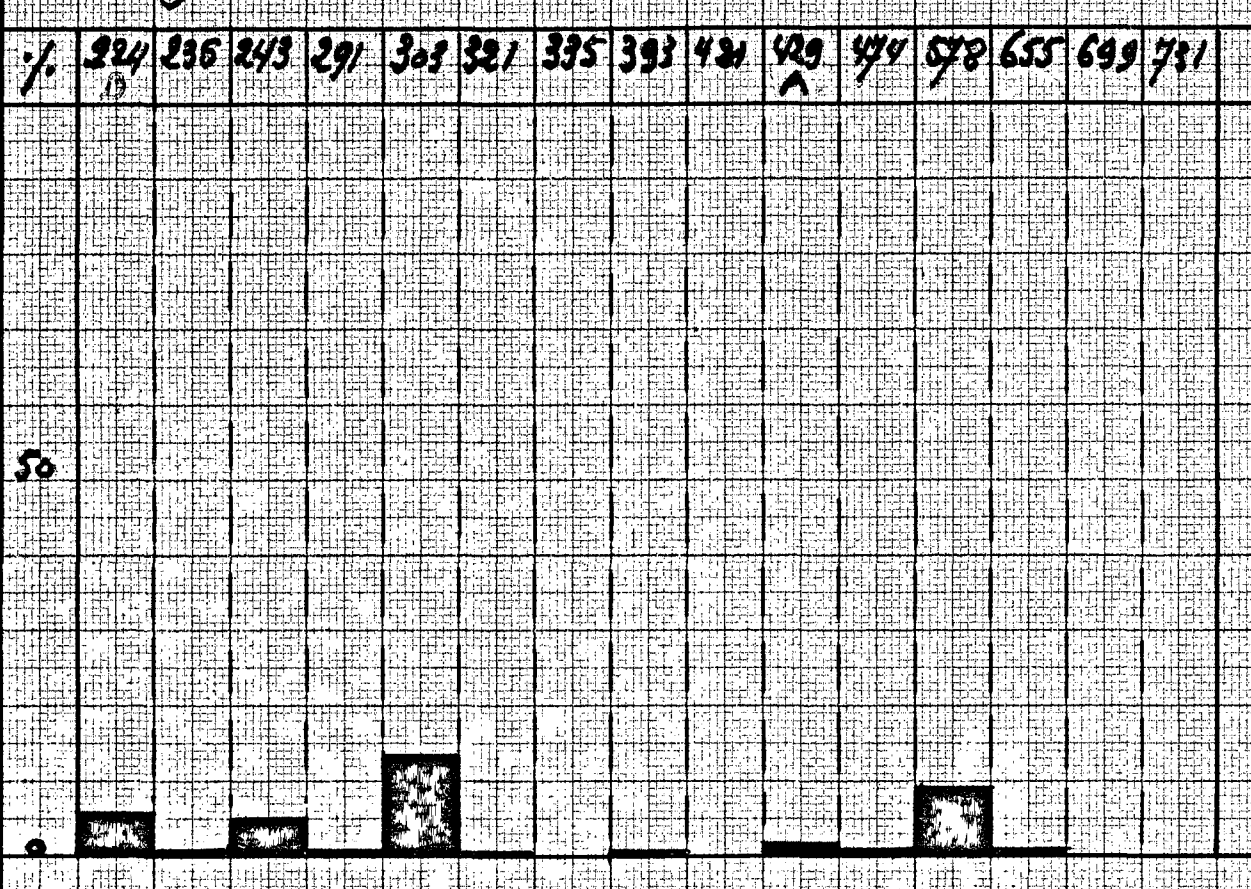
# BREMES-EPIPHYTES.

## POTAMOGETON NATANS.

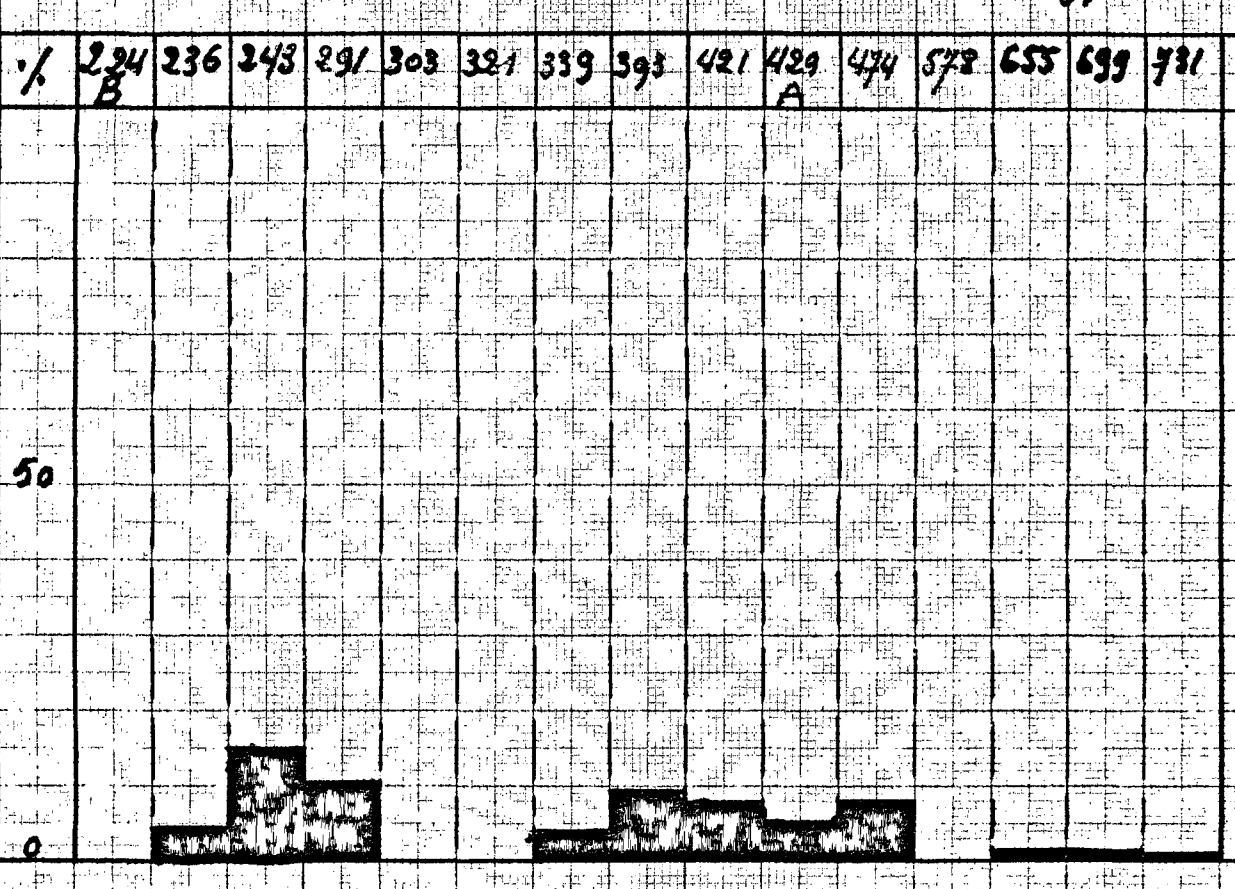
*Achnanthes species*



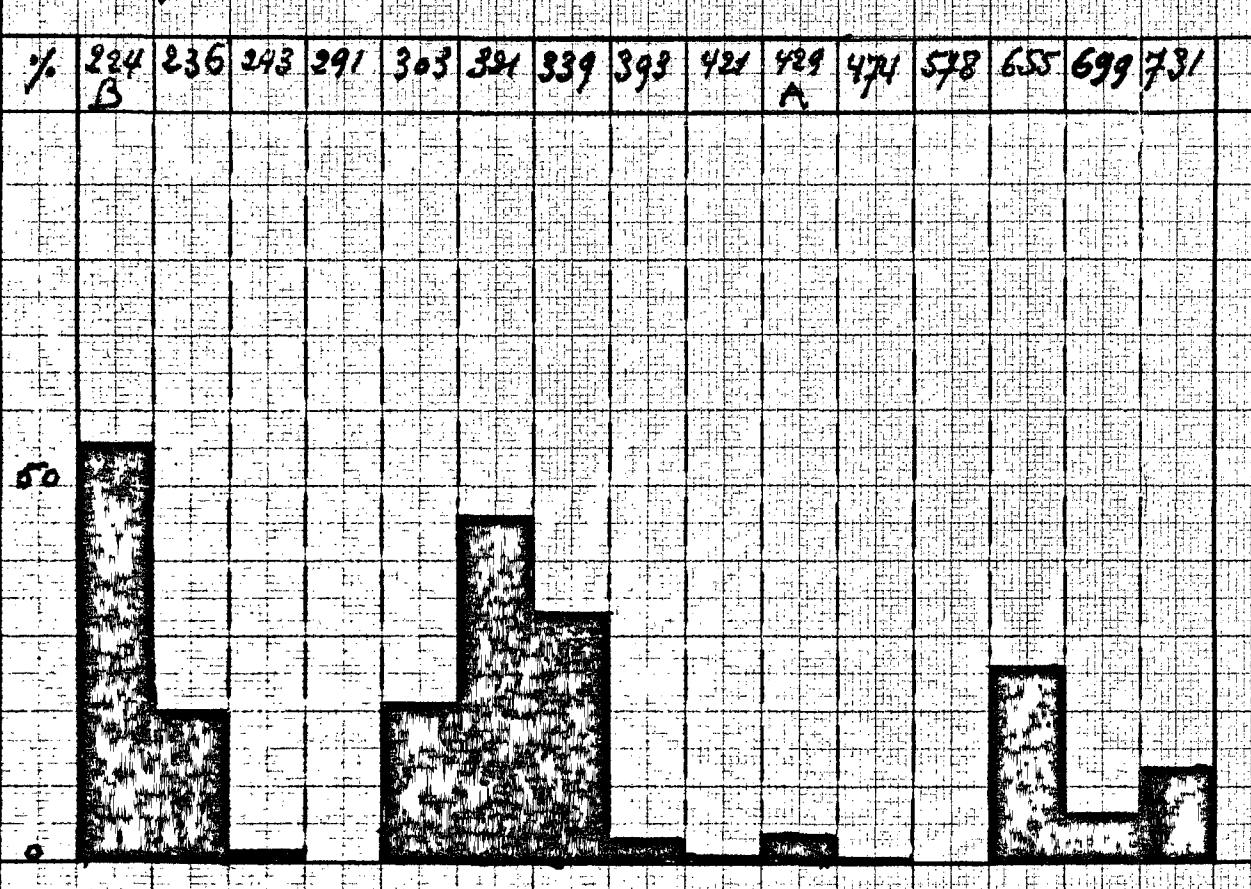
*Cymbella prostrata*



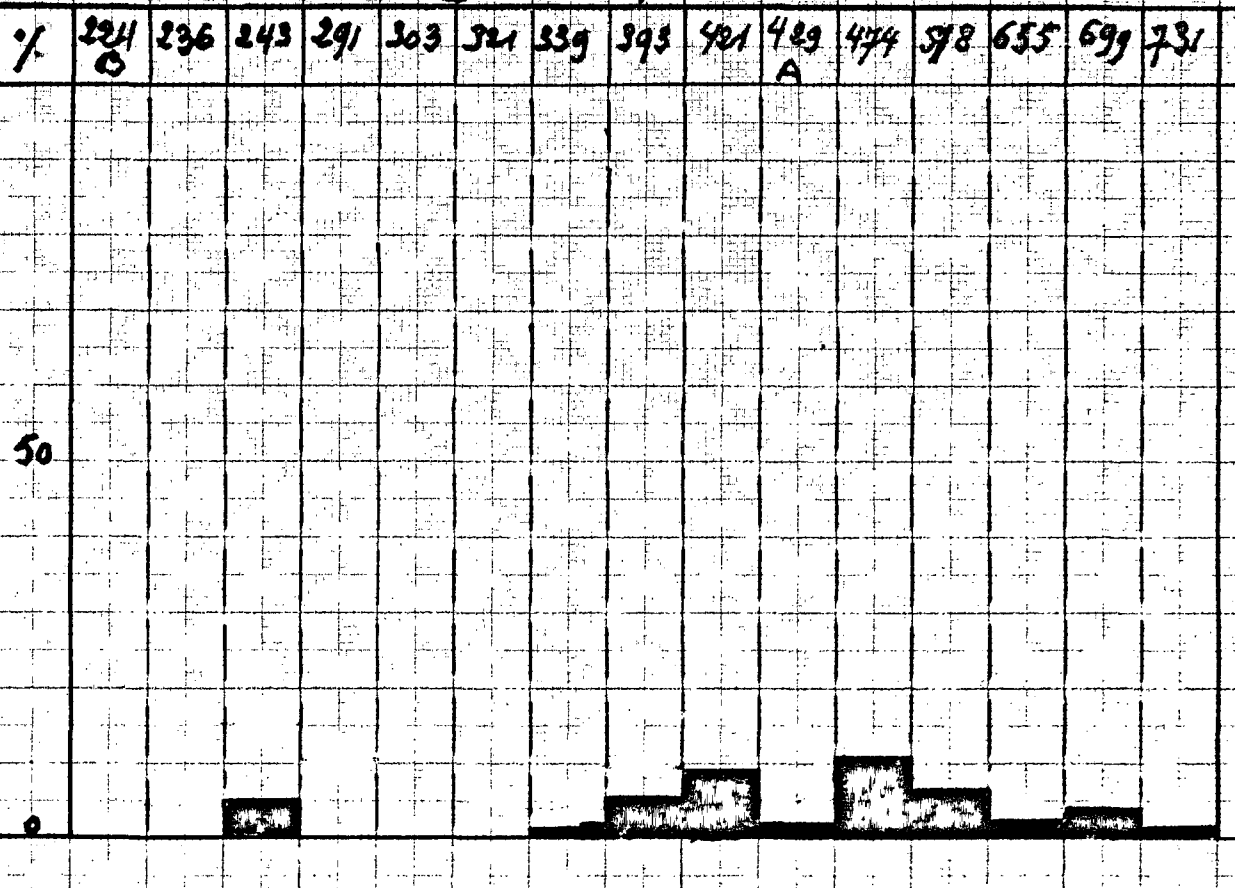
*Achnanthes minutus (type)*



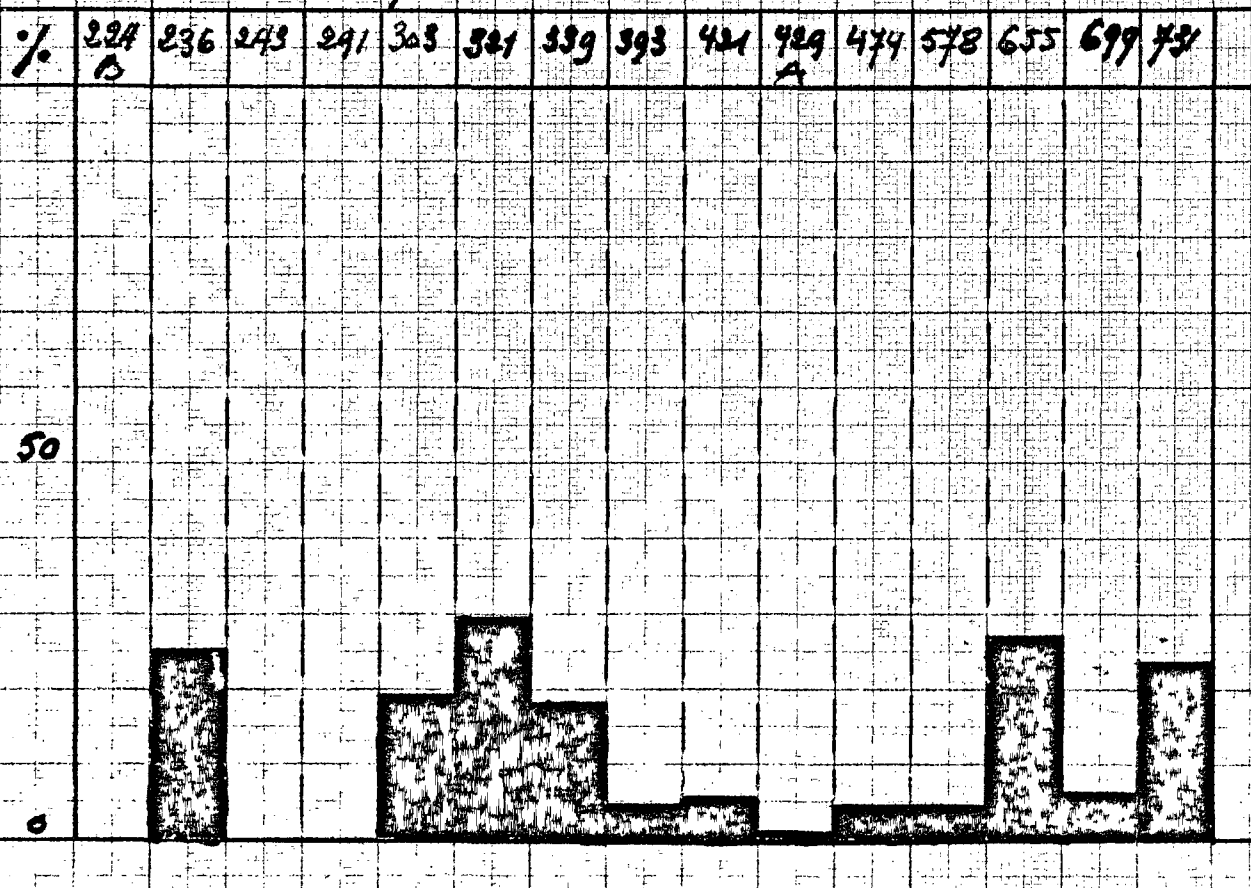
*Epithemia sorax*



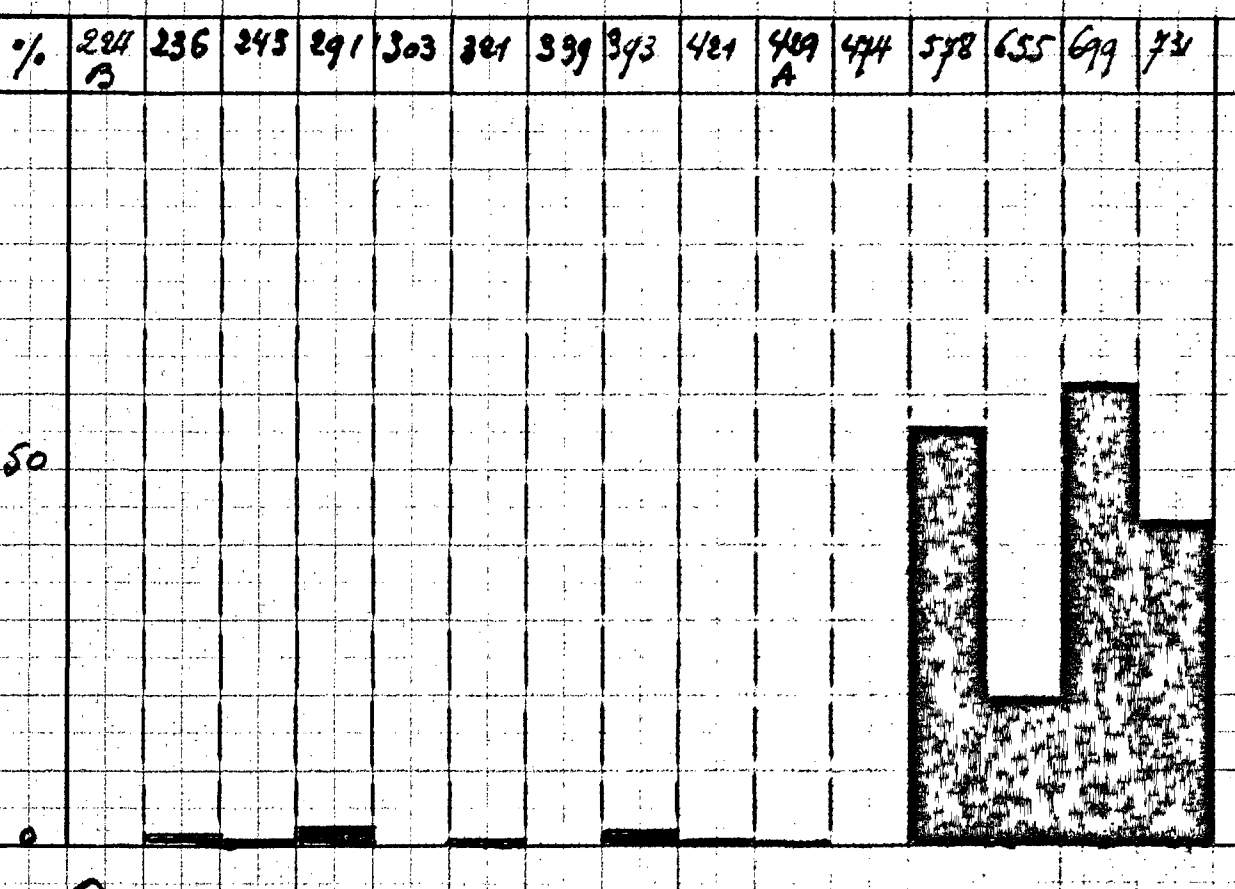
*Achnanthes minutus* var. *cryptocephala*



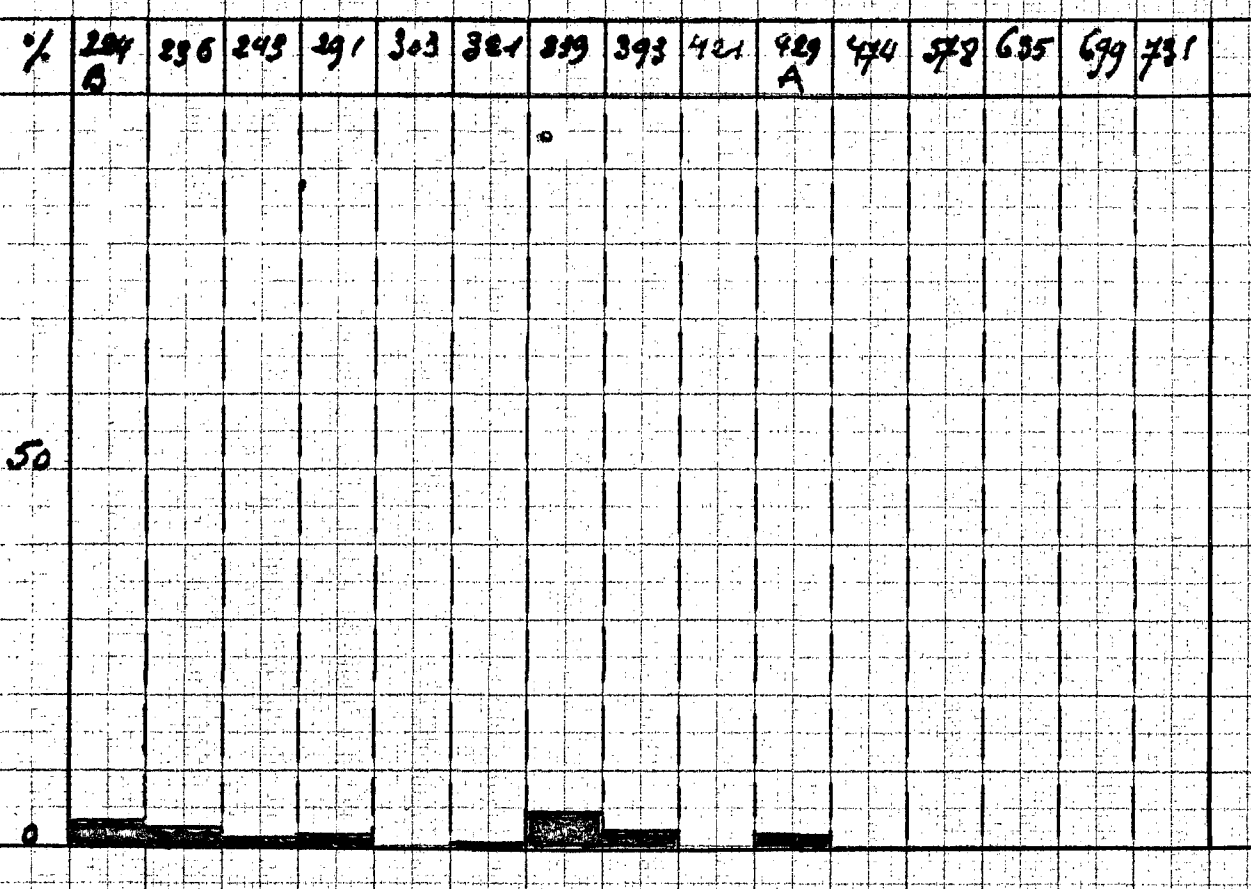
*Epithemia zebra* var. *porcellus*



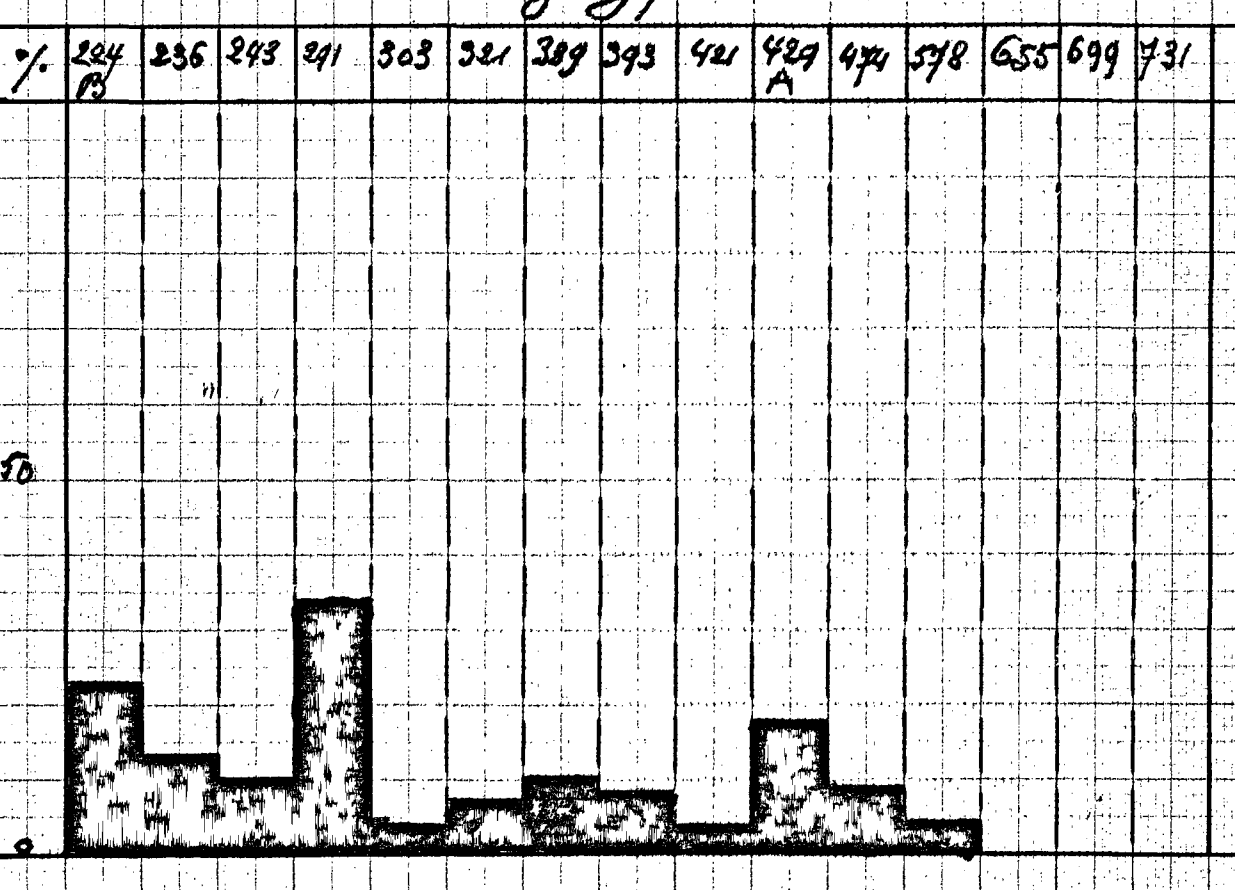
*Cocconeis pediculus*



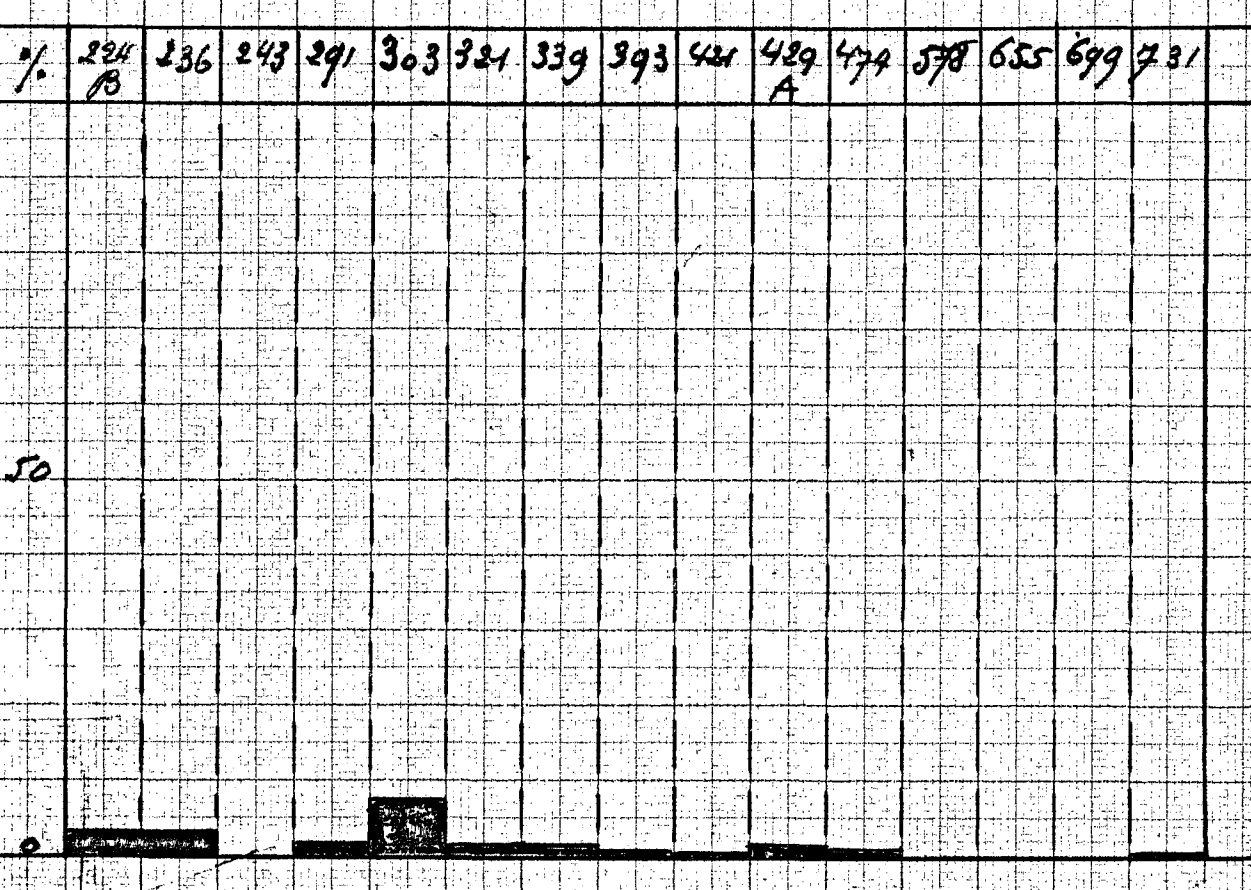
*Navicula cryptocephala*



*Cocconeis placentula* var. *euglypta*



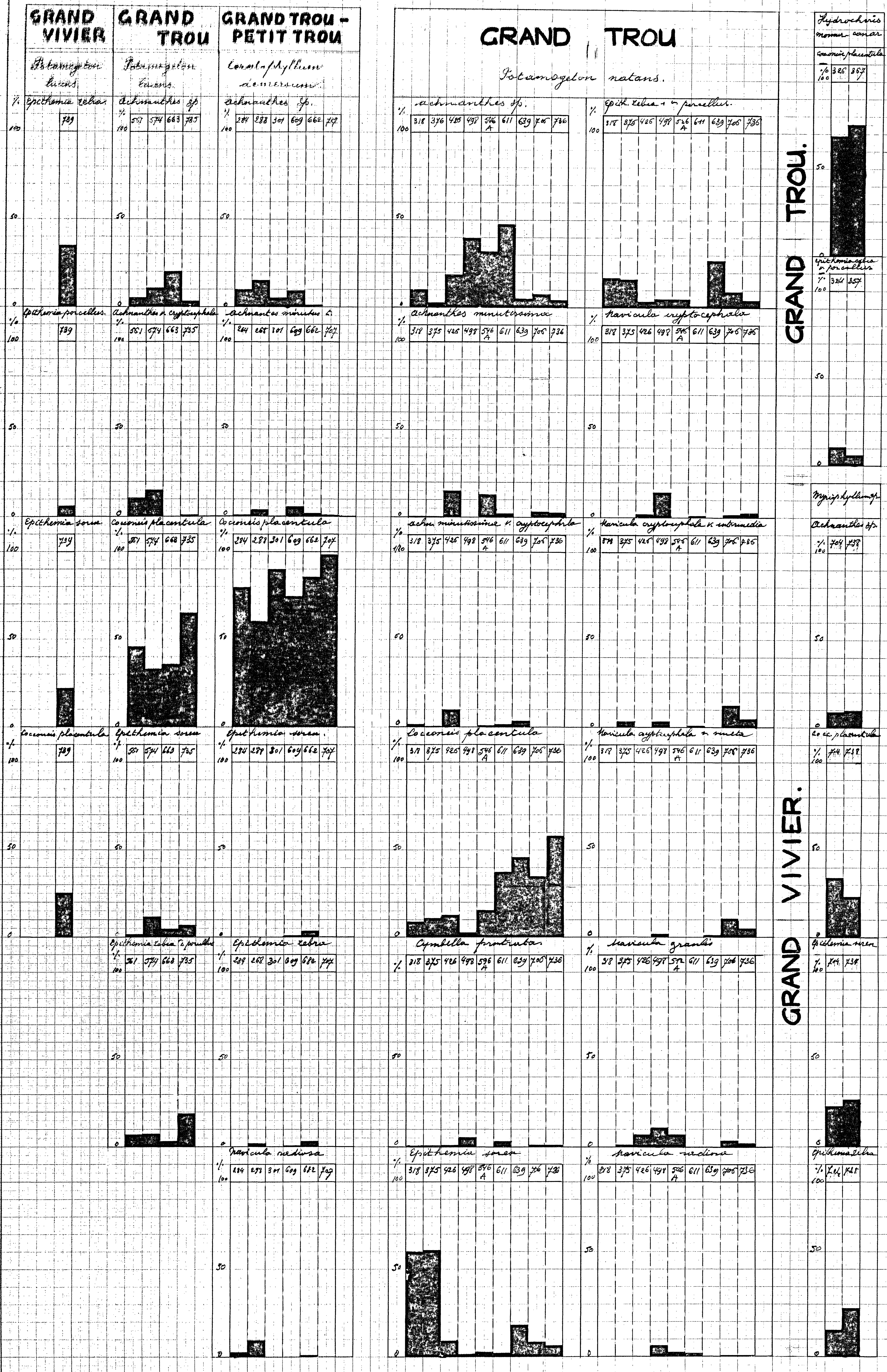
*Navicula gracilis*



BUT  
FILE



# ETANG d'ARDRES EPIPHYTES.



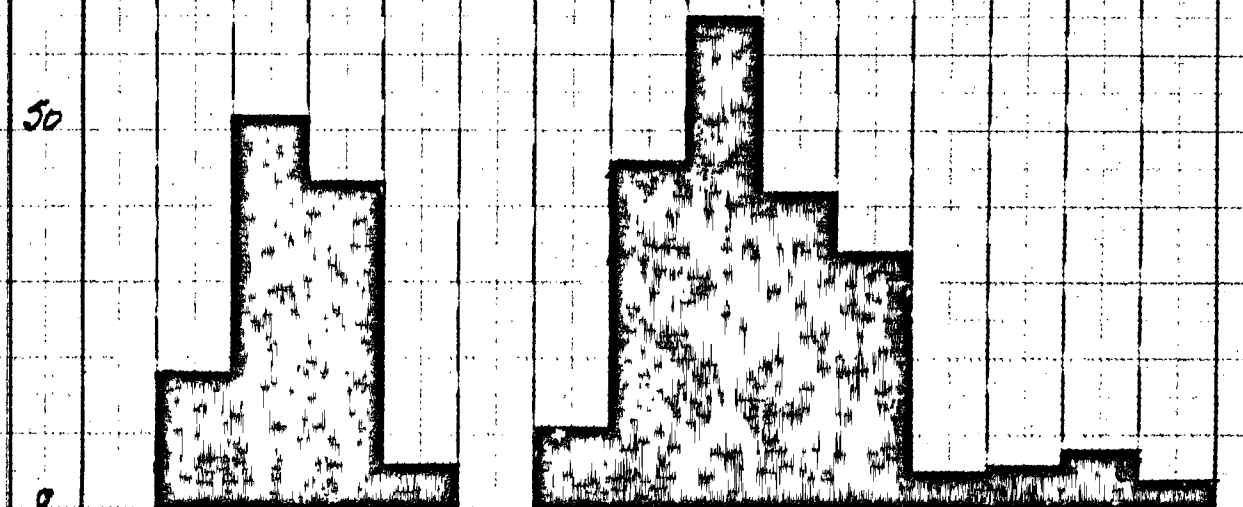


# ETANG DE BREMES

## EPHYPHYTES 1951-1953

### POTAMOGETON NATANS

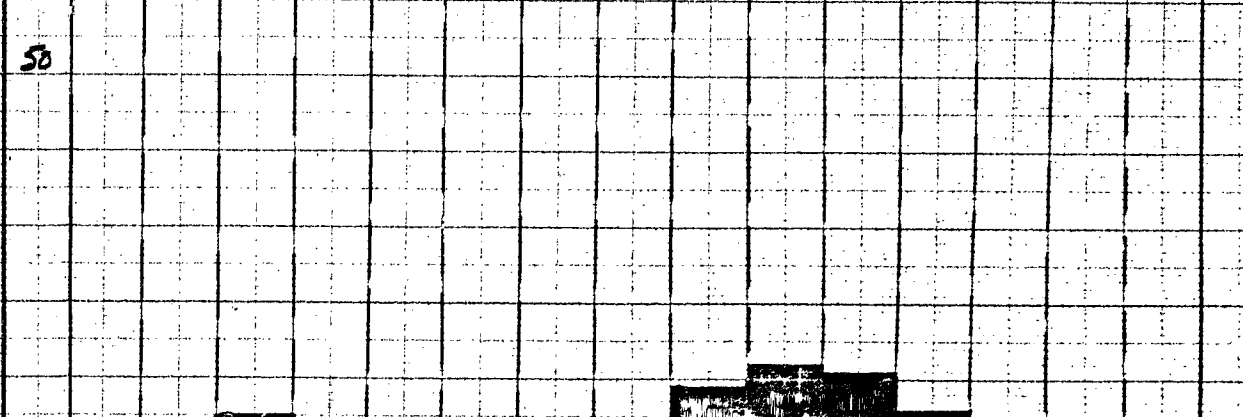
<i>Achnanthes</i> sp.															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	A									A					



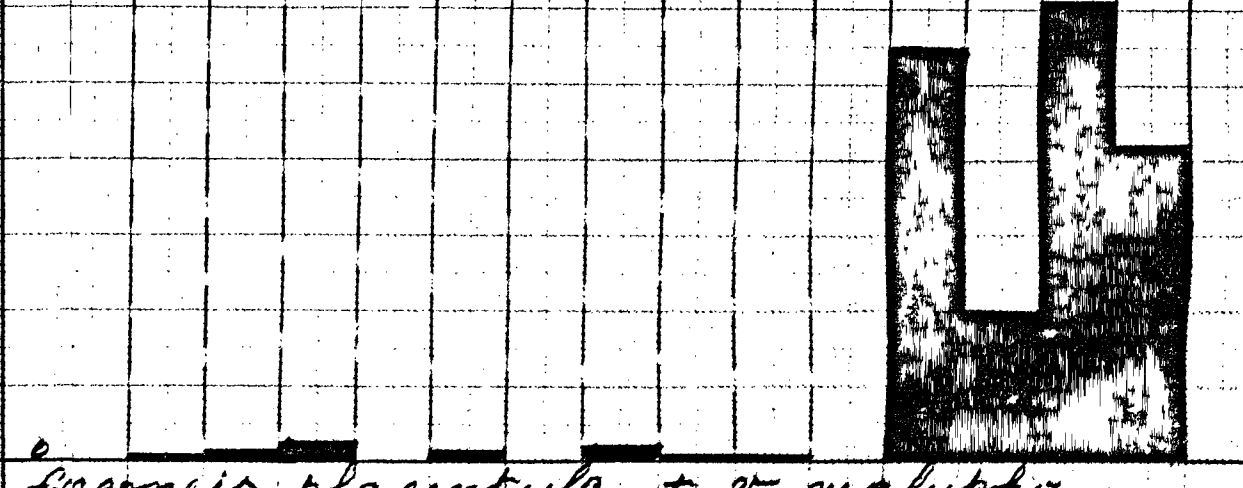
<i>Achnanthes minutus</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B								A						



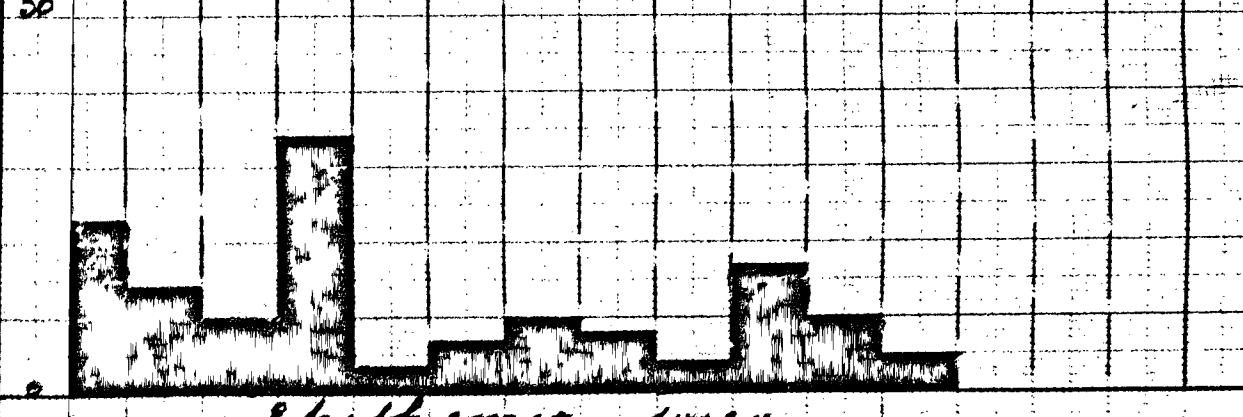
<i>Achnanthes minutus</i> v. <i>cryptocephala</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B								A						



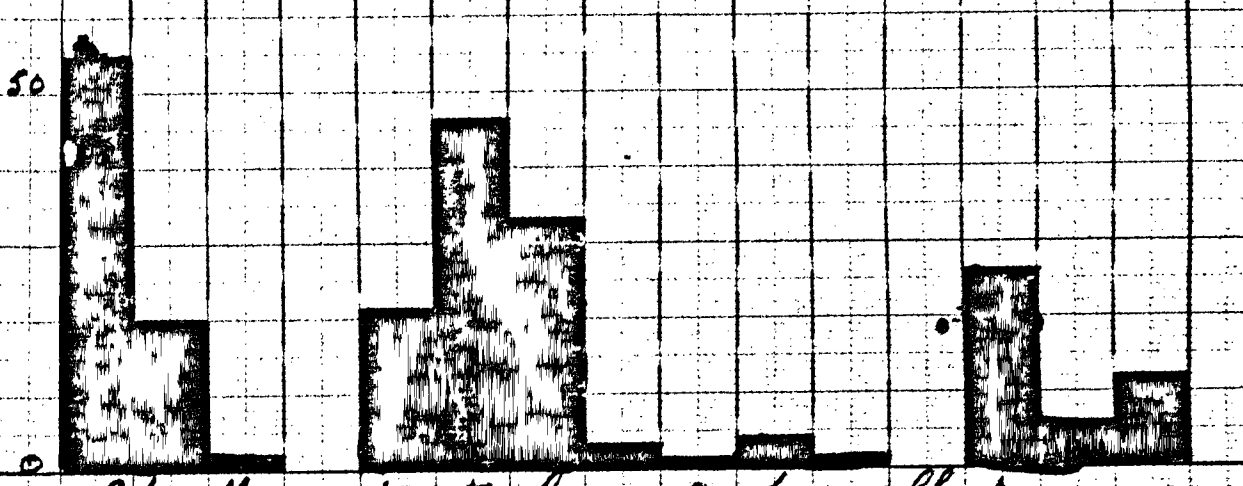
<i>Cocconeis pediculus</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B														



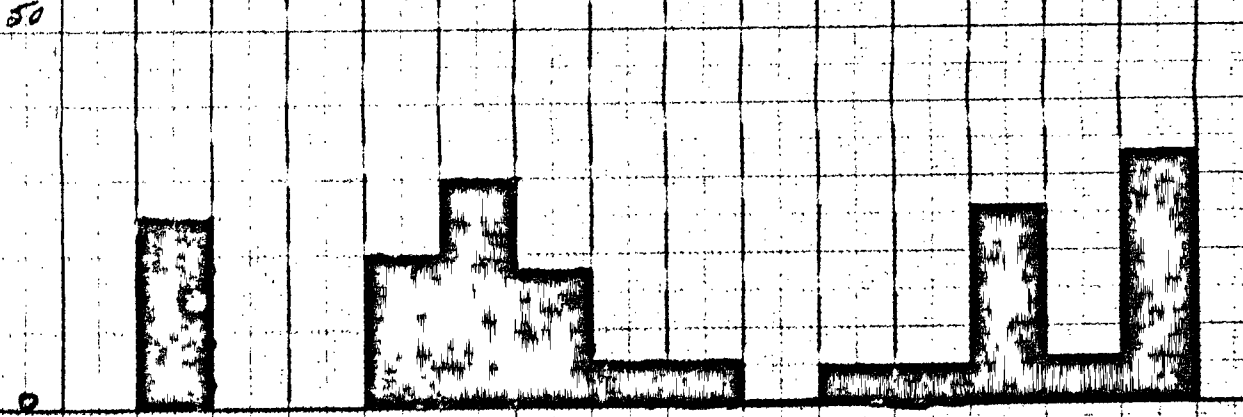
<i>Cocconeis placentula</i> + <i>or. anglypha</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B								A						



<i>Epithemia sora</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B								A						

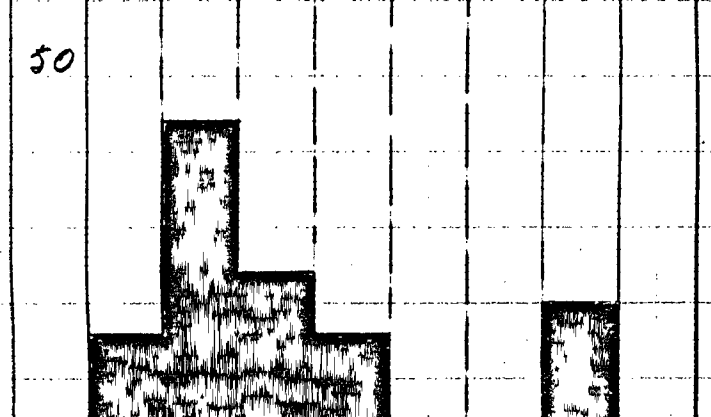


<i>Epithemia zebra</i> v. <i>forellus</i>															
%	224	236	243	291	309	321	339	393	421	429	474	573	655	699	731
	B								A						

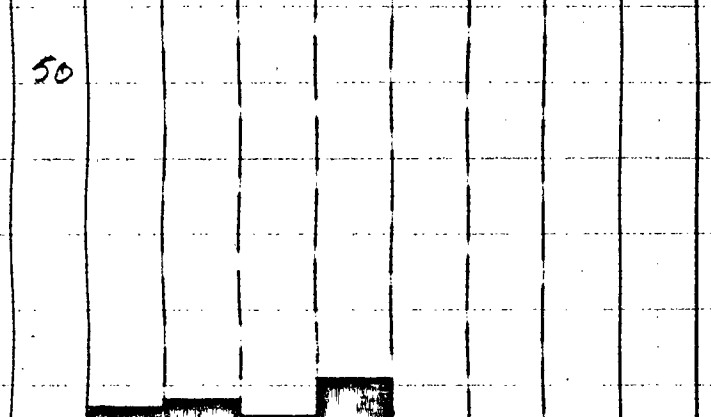


### MYRIOPHYLLUM

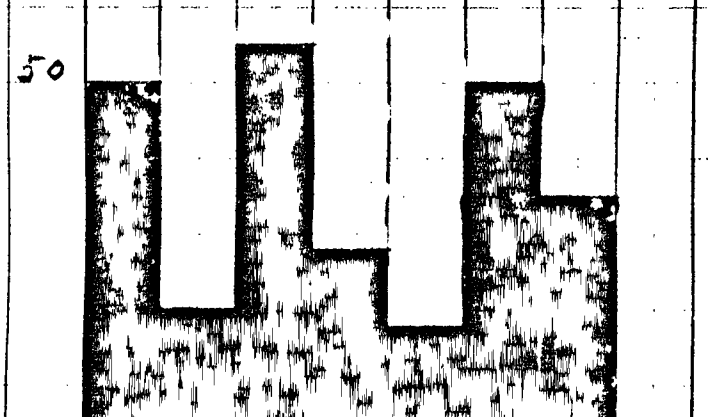
<i>Achnanthes</i> sp.							
%	405	446	551	568	648	699	732
	A						



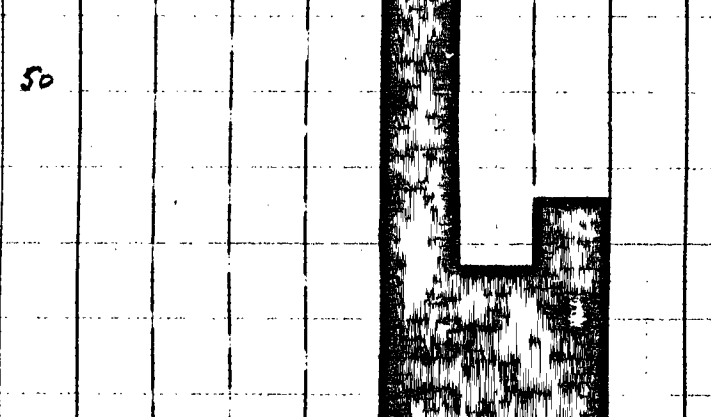
<i>Achn. minutus</i> v. <i>cryptocephala</i>							
%	405	446	551	568	648	699	732
	A						



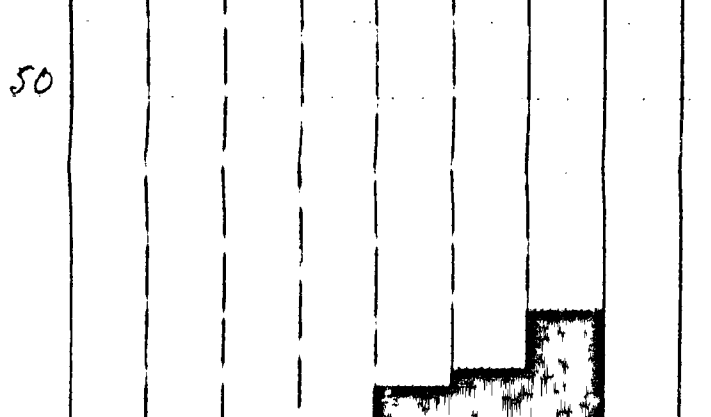
<i>Cocconeis placentula</i>							
%	405	446	551	568	648	699	732
	A						



<i>Epithemia sora</i>							
%	405	446	551	568	648	699	732
	A						

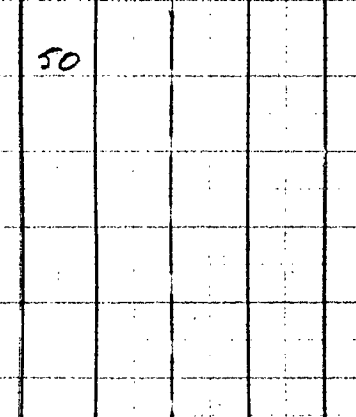


<i>Epithemia zebra</i>							
%	405	446	551	568	648	699	732
	A						

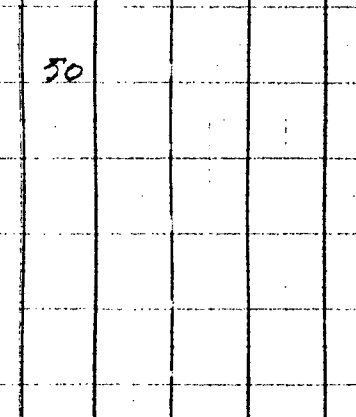


### CERATOPHYLLUM

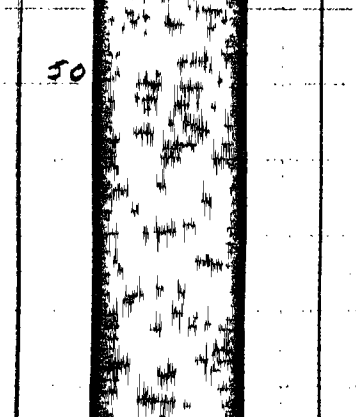
<i>Achnanthes</i> sp.		
%	646	699
	A	



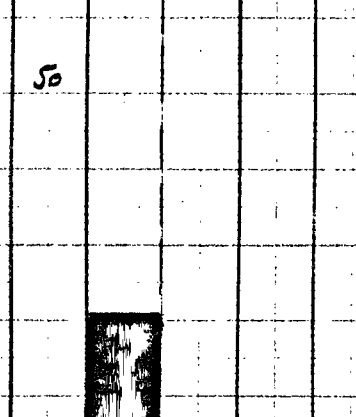
<i>Achn. minutus</i> v. <i>cryptocephala</i>		
%	646	699
	A	



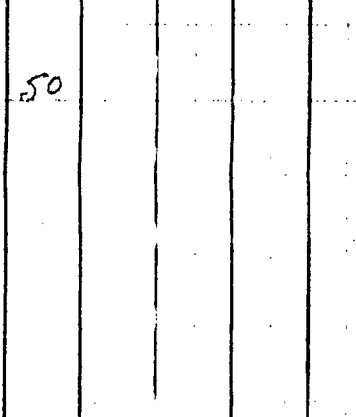
<i>Csm. placentula</i>		
%	646	699
	A	



<i>Ep. sora</i>		
%	646	699
	A	

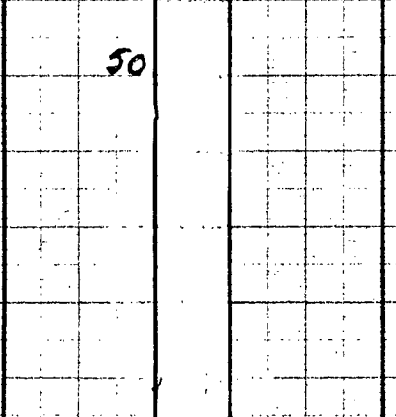


<i>Ep. zebra</i>		
%	646	699
	A	

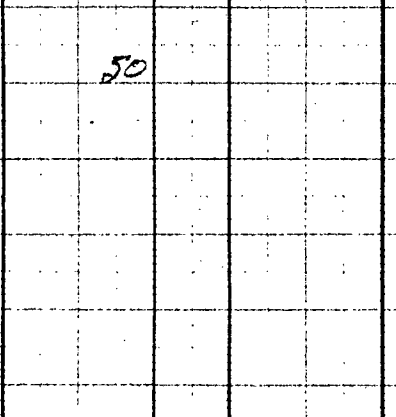


### ELODEA

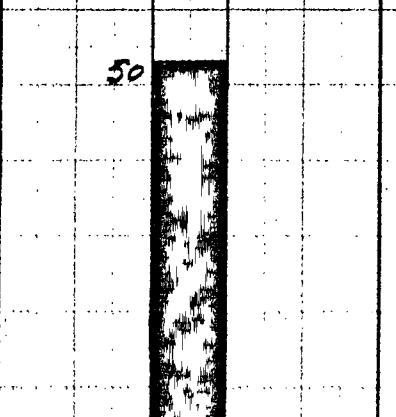
<i>Achnanthes</i> sp.	
%	617



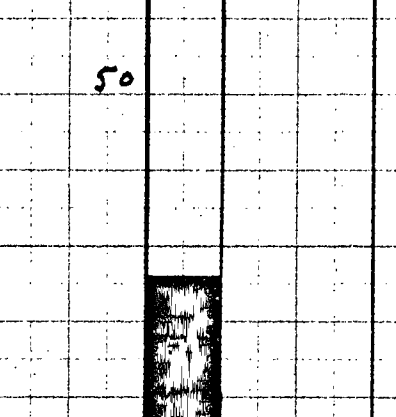
<i>Achnanthes minutus</i> v. <i>cryptocephala</i>	
%	617



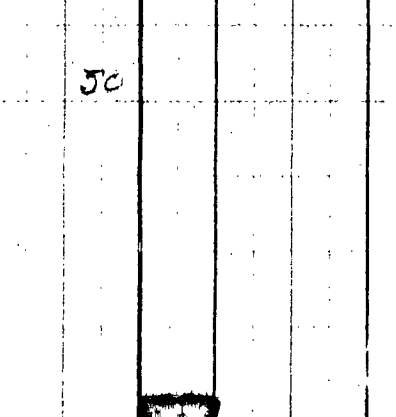
<i>Coc. placentula</i>	
%	617



<i>Ep. sora</i>	
%	617

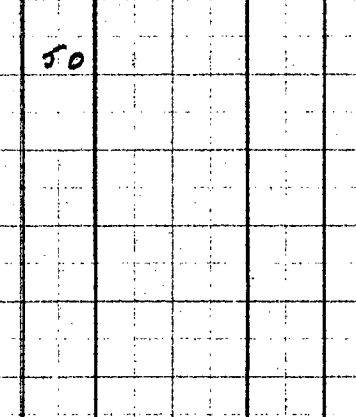


<i>Epith. zebra</i>	
%	617

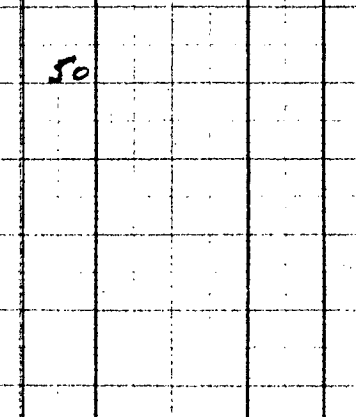


### HYDROCHARIS

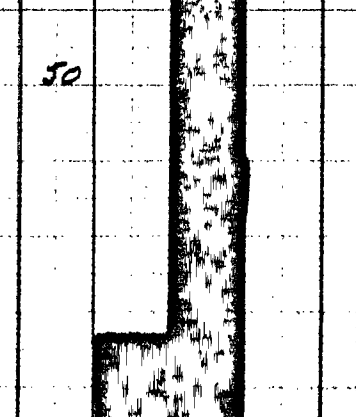
<i>Achnanthes</i> sp.		
%	388	699
	A	



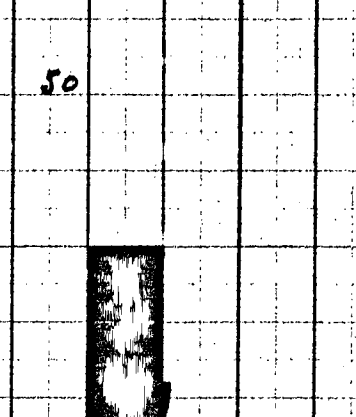
<i>A. minutus</i> v. <i>cryptocephala</i>		
%	388	699
	A	



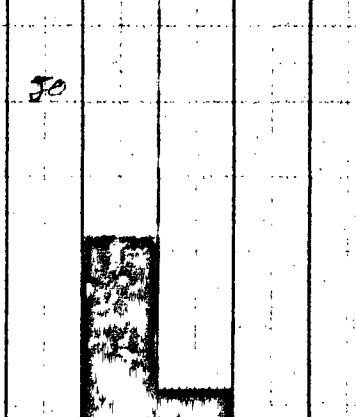
<i>C. placentula</i>		
%	388	699
	A	



<i>Ep. sora</i>		
%	388	699
	A	



<i>Ep. zebra</i>		
%	388	699
	A	

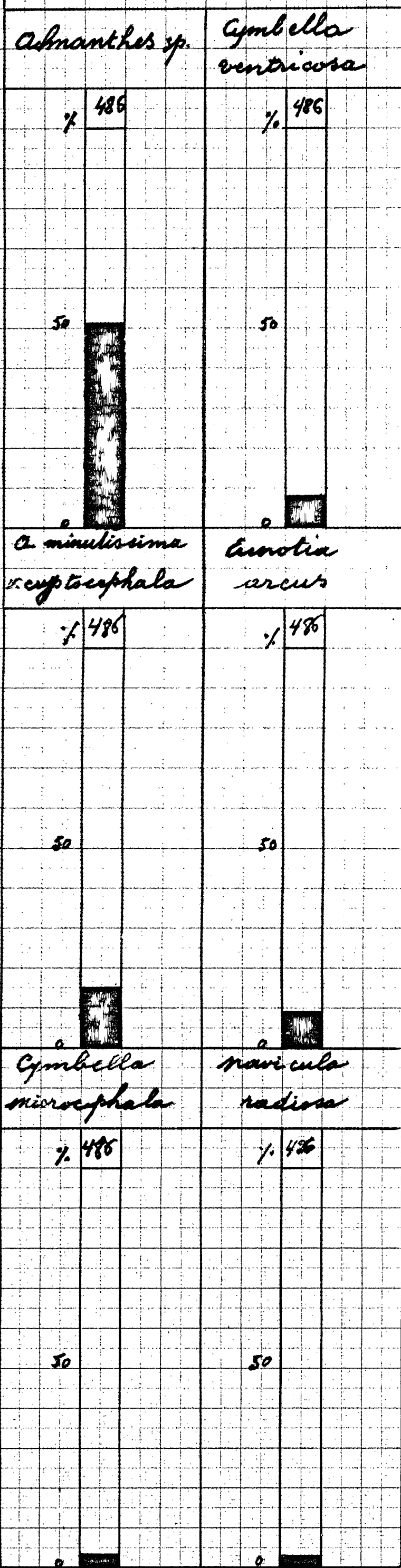




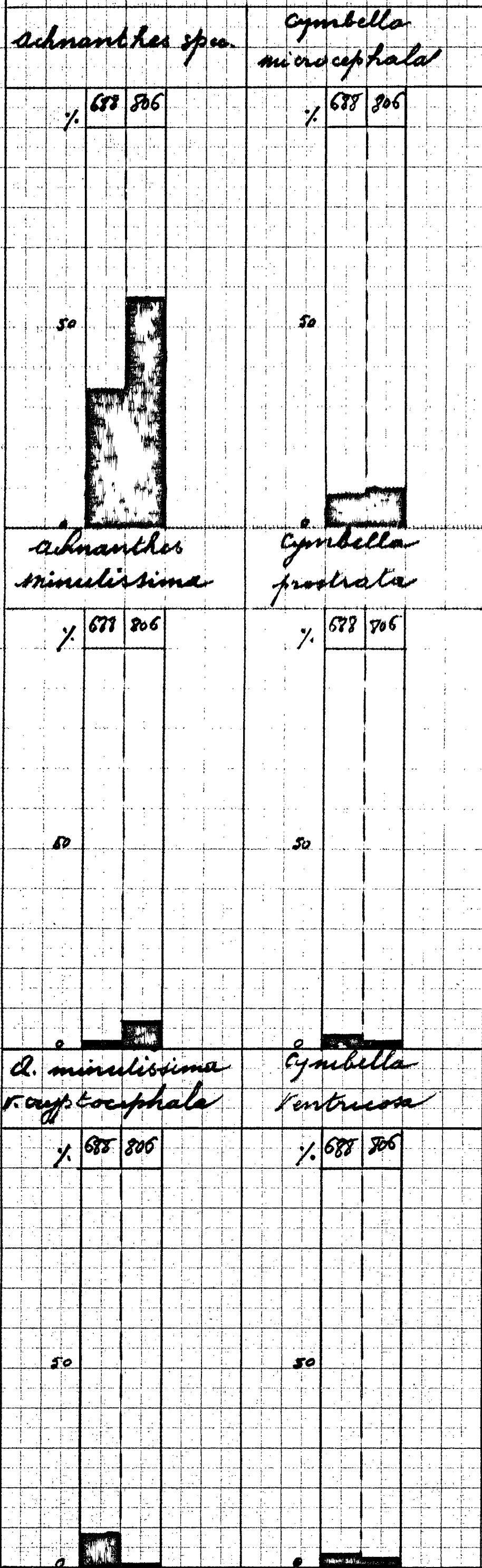
# ETANG DE BRIMEUX

1952  
1954

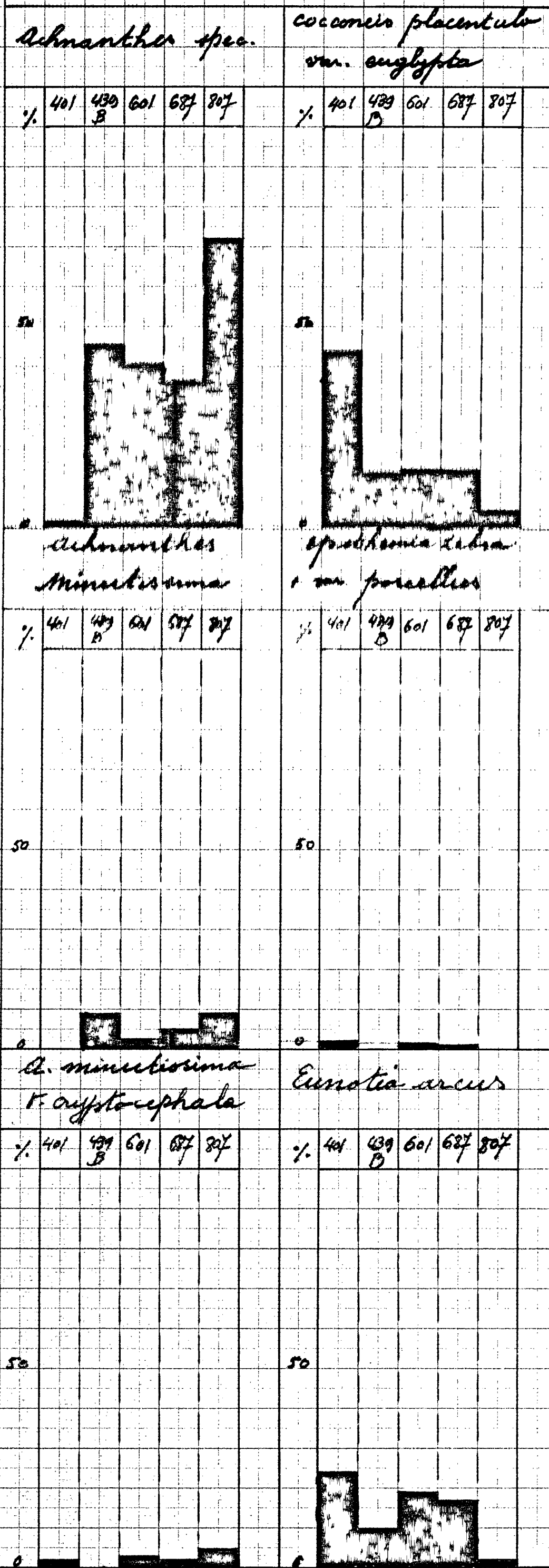
## NYMPHAEA ALBA



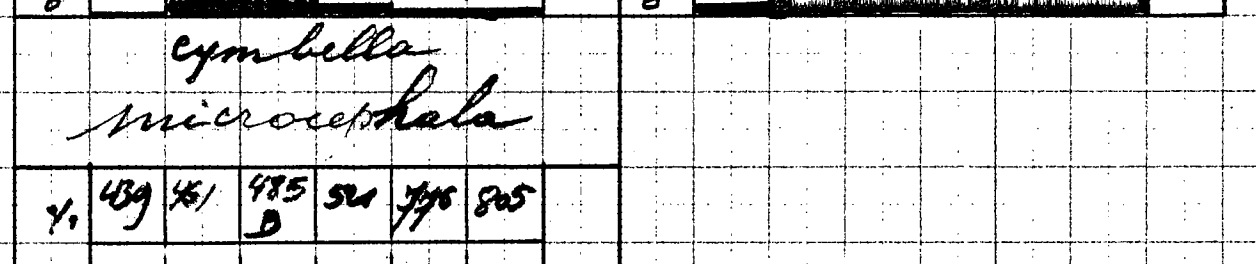
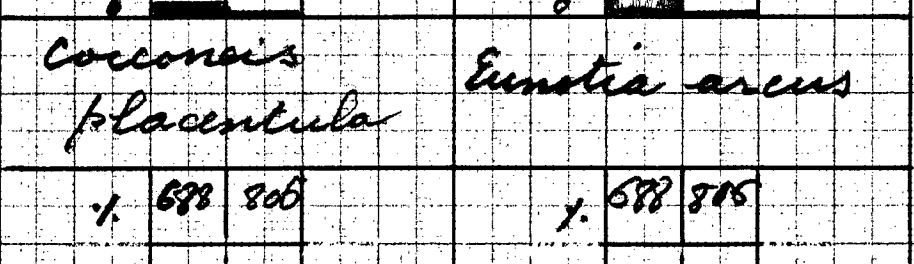
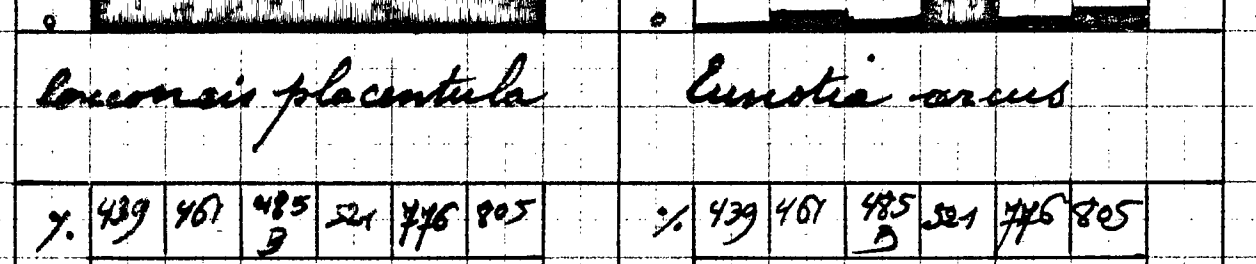
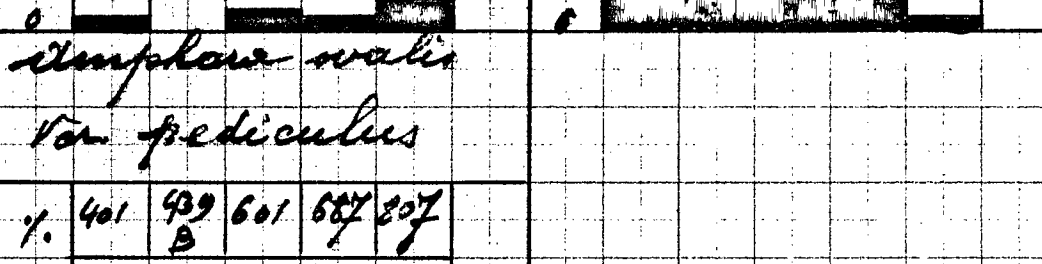
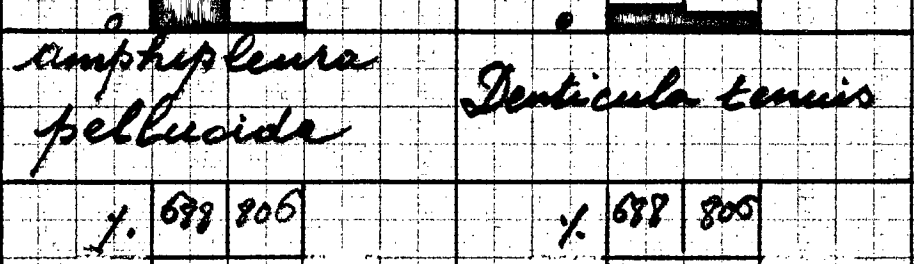
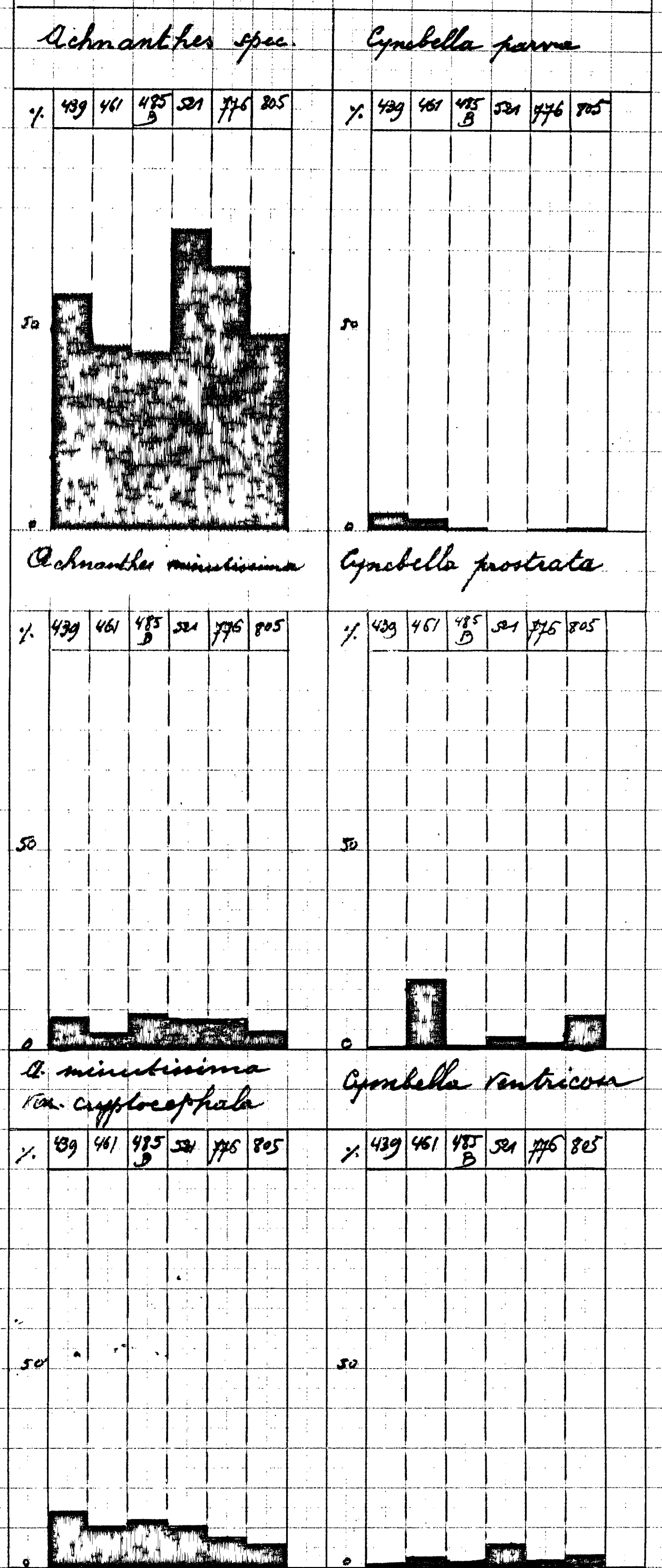
## MYRIOPHYLLUM VERTICILLATUM



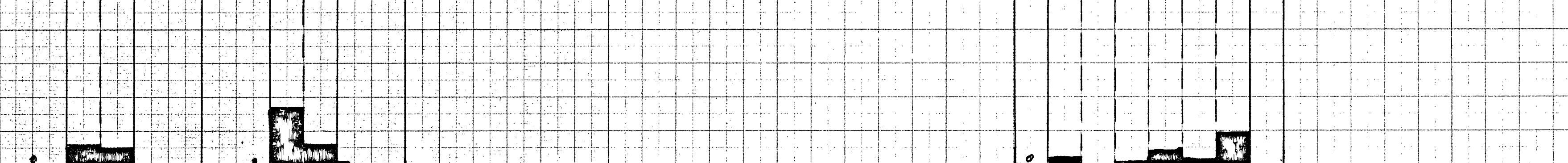
## CERATOPHYLLUM DEMERSUM



## HIPPURIS VULGARIS



## EPIPHYTES



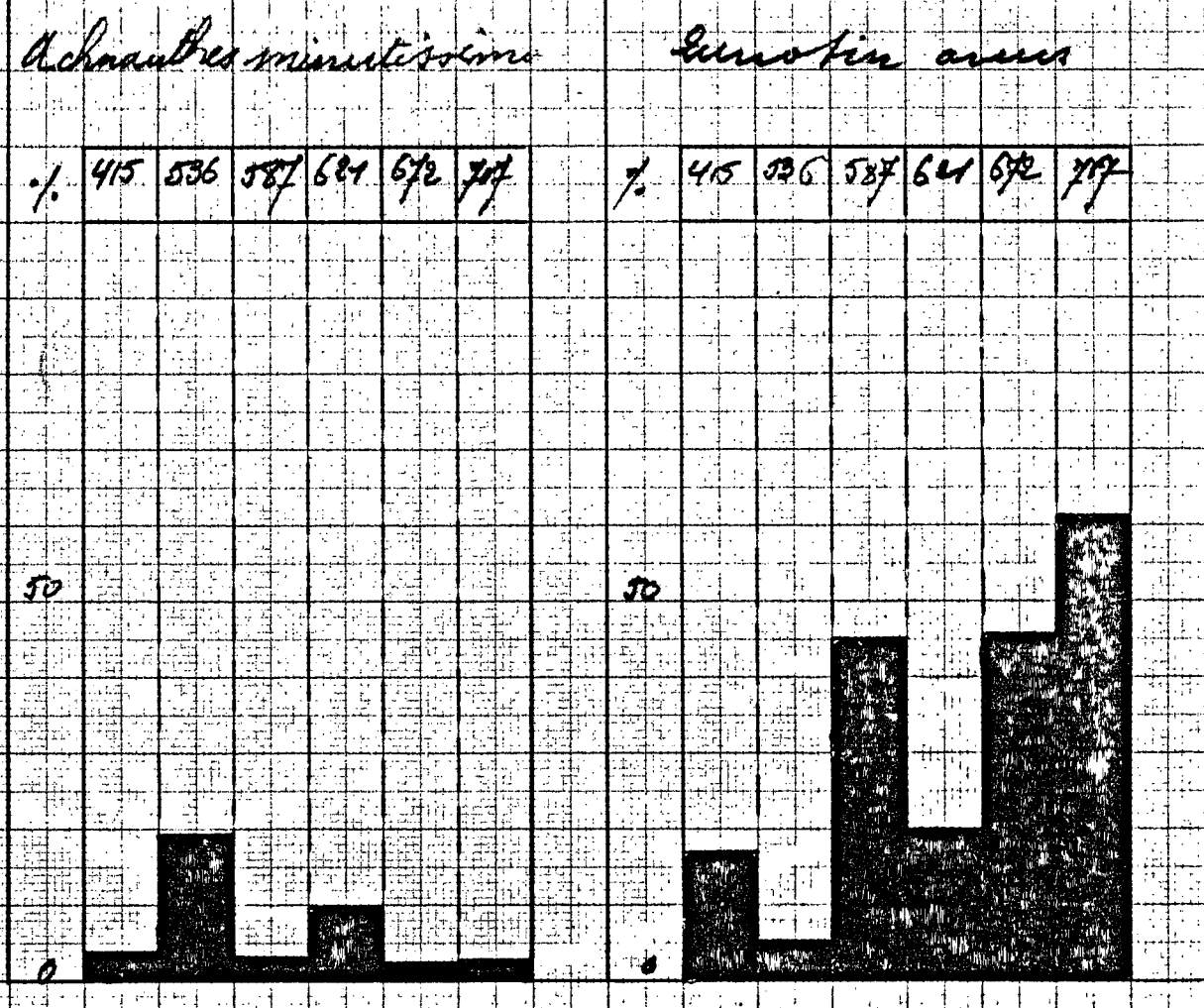
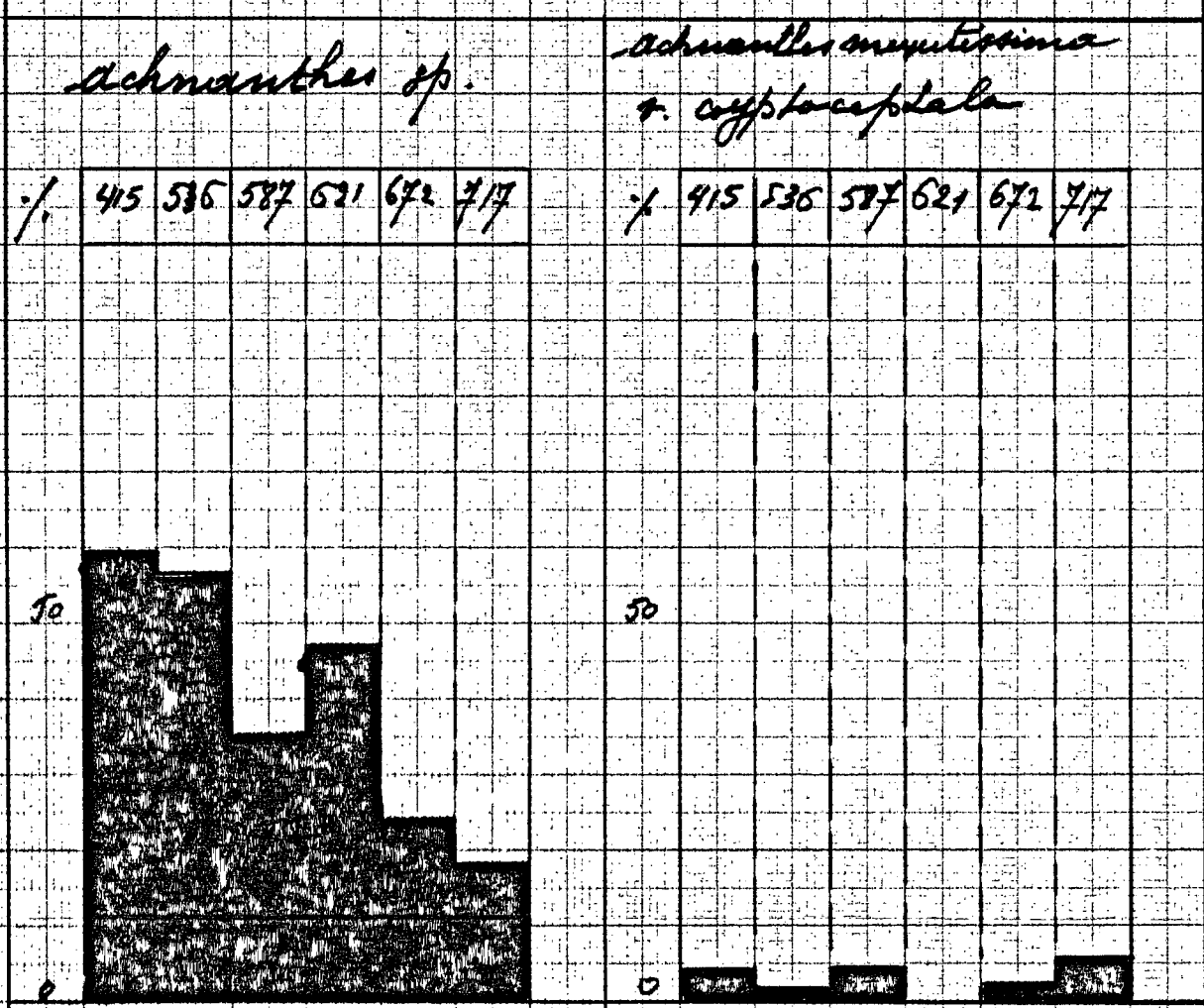




# ETANG DE PAVERY

## EPIPHYTES 1952 - 1953

### MYRIOPHYLLUM SPICATUM





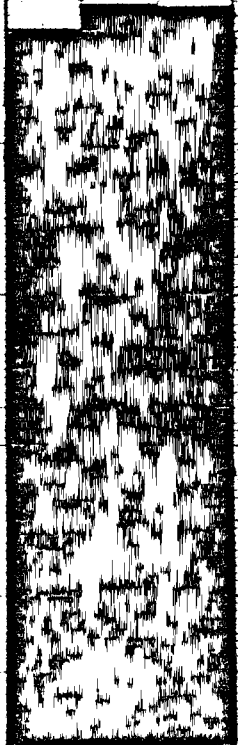
# S<sup>t</sup>AM AND-EPIPHYTES.

## CERATOPHYLLUM DEMERSUM

*Achnanthes* *Cocconeis*  
sp. *placentula*

% 452 651 714

% 452 651 714



50

50

*Achnanthes minutus*  
Bar  
*cryptocephala*

% 452 651 714

*Navicula*  
*radiosa*

% 452 651 714

50

50

## MYRIOPHYLLUM SPICATUM

*Achnanthes* *Cymbella*  
sp. *prostrata*

% 354 408 493 524

% 354 408 493 524

50

50

*Cocconeis*  
*placentula*

% 354 408 493 524

*Gomphonema*  
sp.

% 354 408 493 524

50

50

